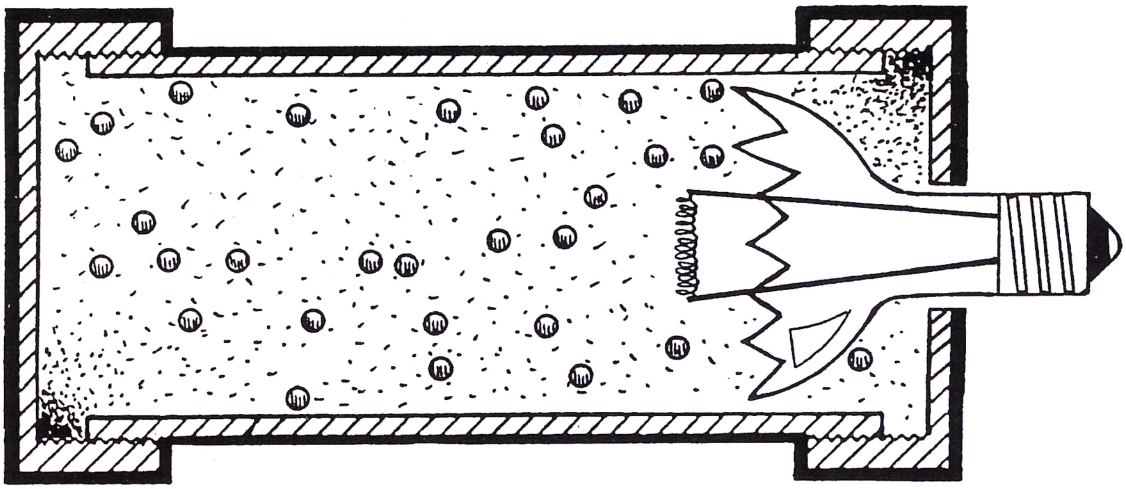
PIPE AND FIRE BOMB DESIGNS

A Guide for Police Bomb Technicians



WRITTEN AND
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LEE SCOTT

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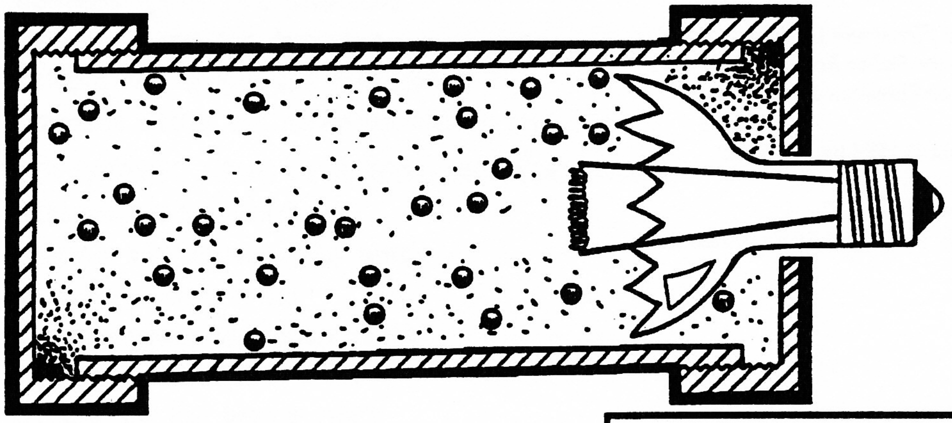

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LEE SCOTT

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Pipe and Fire Bomb Designs:
A Guide for Police Bomb Technicians
Written and illustrated by Lee Scott

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- Chemical reaction bomb
- Molotov variation—tampon and bottle of gasoline

WARNING

This manual has been prepared for military personnel and law enforcement officers to assist in the recognition and composition of improvised explosive devices. It is in no way intended to be a training manual for those with illegal intent, nor is it to be considered a substitute for professional, certified training in military and/or law enforcement explosive ordnance disposal (EOD) procedures.

Construction of improvised explosive devices is highly illegal and extremely dangerous. The resulting end products are extremely unstable and unpredictable. Whenever dealing with explosives, special precautions must be followed in accordance with industry standards for experimentation and production. Failure to strictly follow such industry standards may result in harm to life and limb.

Therefore, the author, publisher, and distributors of this book disclaim any liability from any damages or injuries of any type that a reader or user of information contained within this book may encounter from the use or misuse of said information. Use this book and any end product or by-product at your own risk!

This book is sold for academic study and informational purposes only.

READ THIS BEFORE YOU GO ANY FURTHER.

Building a bomb can seem very glamorous to many people. If you enjoy reading as much as I do, chances are that your library is full of bomb books. Yet you should not ever even consider building a real bomb.

That statement seems to contradict everything in this book. I don't write bomb books for the purpose of teaching the reader how to actually build a working device. Anyone with a little imagination could have come up with almost every one of the devices in this manual. I highly suggest that you, like myself, enjoy merely having the knowledge of how these kind of things work.

Well over half of all people who build a bomb blow themselves up in the process. Terrorists do it all the time, and many of them are electrical and chemical engineers. All it takes is one grain of gunpowder to get in the threads of the pipe you're using to build the bomb to kill or maim you. You see, as you screw the cap on the pipe, the metal threads grind together and ignite the grain of gunpowder. This in turn detonates the rest of the powder. You won't be reading anymore bomb books after that.

Building a bomb is a major federal crime! Even if the device is not yet constructed, possession of components to build what could be a bomb is just as serious. That's why you see only drawings and not photos in this manual.

If you want to build a bomb just to see if you can, don't use real explosives. Build models, although be aware that even this is illegal in some states. Don't let the simplicity of the devices described in this manual tempt you. It's just not worth it.

Above all, don't try anything depicted in this manual on your own. Never even consider building a real bomb! Enjoy just knowing how.

INTRODUCTION

The sole purpose of this manual is to provide law enforcement personnel with a good, solid foundation on the construction and use of improvised explosive devices. A small, well-placed pipe bomb in a room full of computers can easily do more damage than a nuclear bomb detonated in the middle of the desert. This book may find its way into hands of the criminal element, but so has all of the training manuals used to train bomb technicians. Today, nothing is sacred. I assure you that neither the publisher nor myself, the author, have any intention of deliberately providing criminals with arcane information. There is nothing in this book that the bad guys don't already know.

On the other hand, we have the police and other law enforcement officers entrusted with preventing crime. The standard police academy gives the average street cop very little information on the actual construction of homemade bombs. Even the officers who join the bomb squad are told in the bomb academy *not* to share what they know with regular officers. Their philosophy is that the fewer people knowing how bombs work, the better, and that includes fellow officers. I think this is an injustice to the law enforcement community. Hopefully, this book will change all that.

At least 99 percent of all bombs the street cop will encounter will be very simplistic in nature and construction. The other 1 percent are where the real problems lie. Unfortunately, it's always impossible to determine if you are dealing with a high school prank or a terrorist trap. A pipe capped on both ends with a fuse hanging out half burnt may simply be what it looks like—a dud. On the other hand, that same pipe may contain a multitude of switching mechanisms easily bought from electronics stores such as Radio Shack or the local hobby shop. *Always* expect the worst. Unless you have X-ray eyes, you don't know what is inside the pipe, period! Unless you enjoy listening to books on tape because you have no eyes, leave the damn thing alone and call the the bomb squad.

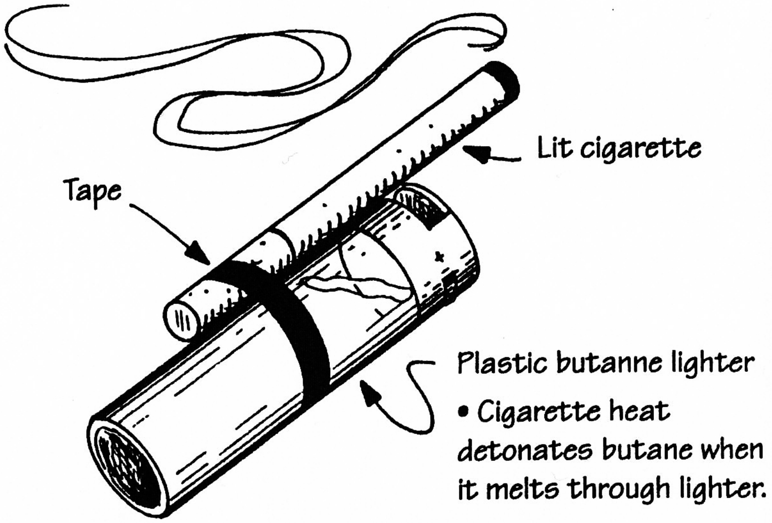
This book is written from the viewpoint of "If I were a bomber." The most successful law enforcement officers are capable of putting themselves in the position of the person they are hunting. As the old saying goes, "If you want to catch a criminal, hire a criminal."

This book may find its way into terrorists hands, but so has such classics as Joseph Stoffel's *Explosives and Homemade Bombs*. I'm sure Mr. Stoffel never intended his book to become a training manual for terrorists, but it has. Nothing is sacred anymore. As stated in the 1992 movie *Sneakers*, there truly are "no more secrets."

If you are a peace officer, it is my sincere hope that when you finish this book you walk away better informed. With the average citizen's right to bear arms dwindling even as you read this, bombings will become more and more common. Criminals used violence before we had guns and will continue to after they are gone. Our prisons are full simply because people cannot control their emotions. A person who has learned to control his emotions never need worry about doing time. Until man has learned to set aside his ego, there will always be violent crime.

Lee Scott, 1994

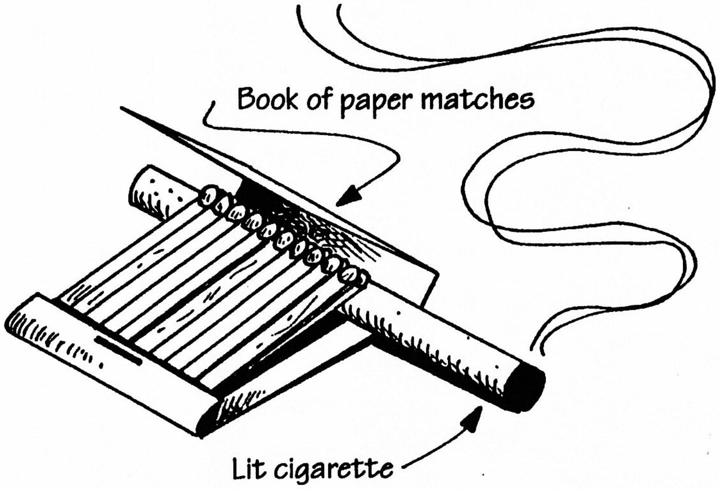
MISCELLANEOUS FIRE STARTERS AND HOMEMADE BOMBS


Tape
Lit cigarette
Plastic butanne lighter

- Cigarette heat detonates butane when it melts through lighter.

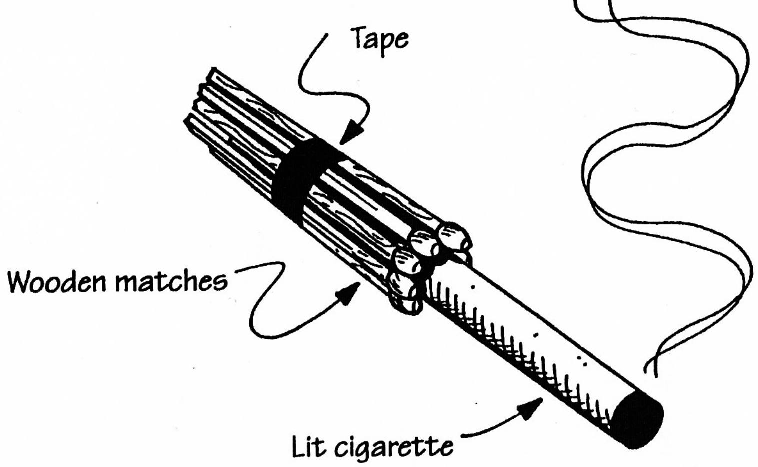
Lighter bomb with cigarette delay

- Commonly used to light garbage cans on fire.

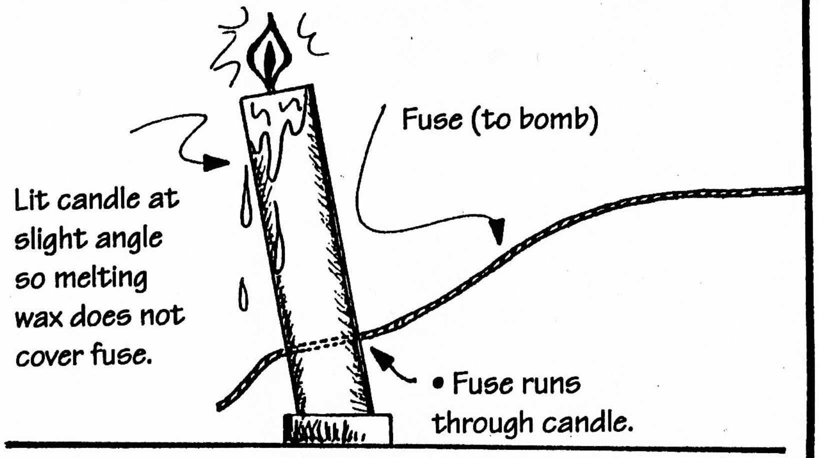

Book of paper matches
Lit cigarette

Cigarette and matchbook incendiary device

- Commonly used to light garbage cans on fire.


Tape
Wooden matches
Lit cigarette

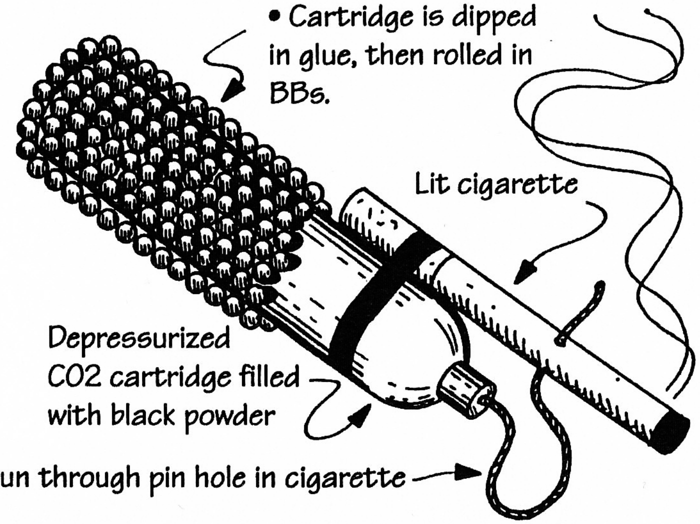
Cigarette incendiary delay device


Fuse (to bomb)

Lit candle at slight angle so melting wax does not cover fuse.

- Fuse runs through candle.

Simple candle-delay method



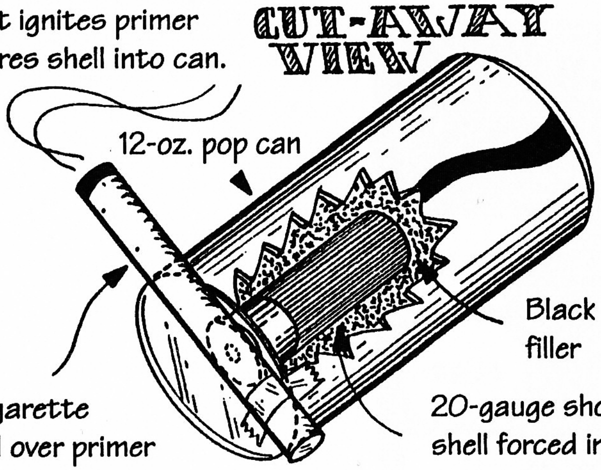
- Cartridge is dipped in glue, then rolled in BBs.

Lit cigarette

Depressurized CO2 cartridge filled with black powder

Fuse run through pin hole in cigarette

CO2 cartridge bomb with cigarette delay



- Heat ignites primer and fires shell into can.

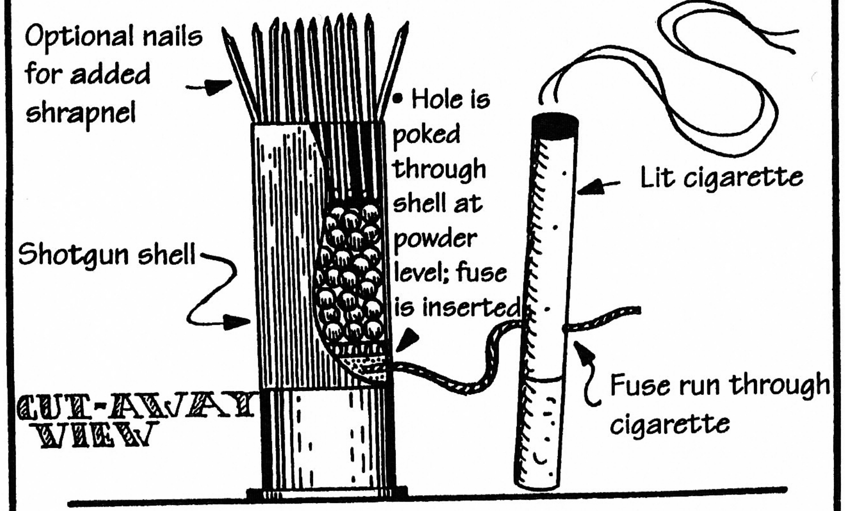
12-oz. pop can

Black powder filler

Lit cigarette taped over primer on shotgun shell

20-gauge shotgun shell forced in mouth of pop can

Delayed pop can grenade (cutaway view)



Optional nails for added shrapnel

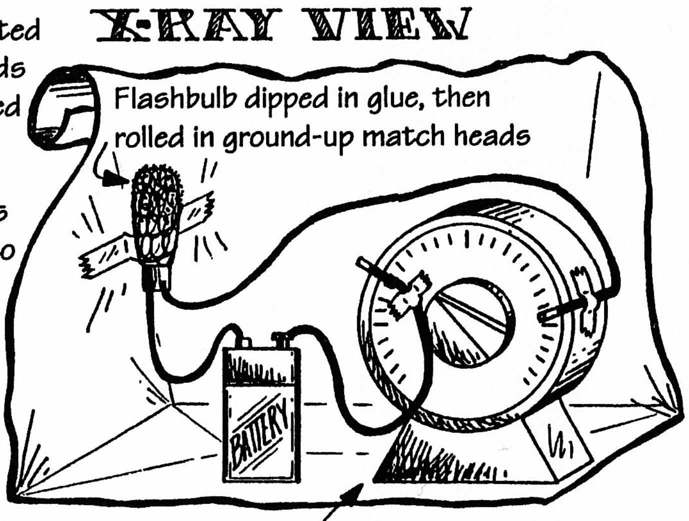
- Hole is poked through shell at powder level; fuse is inserted

Lit cigarette

Shotgun shell

Fuse run through cigarette

Modified shotgun shell bomb with cigarette delay



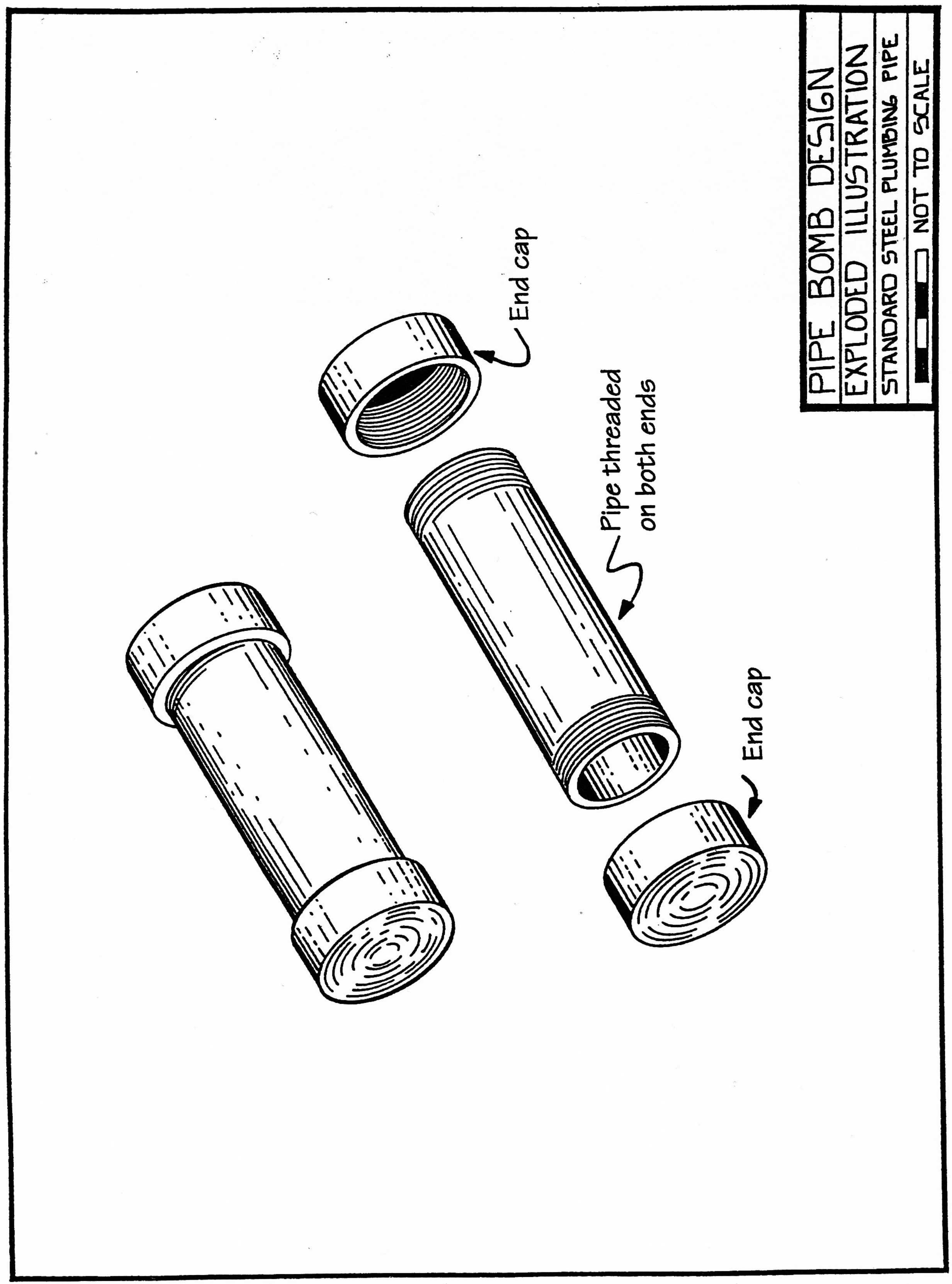
- Insulated wire leads are bared on end.
- Bulb is taped to inside of bag.

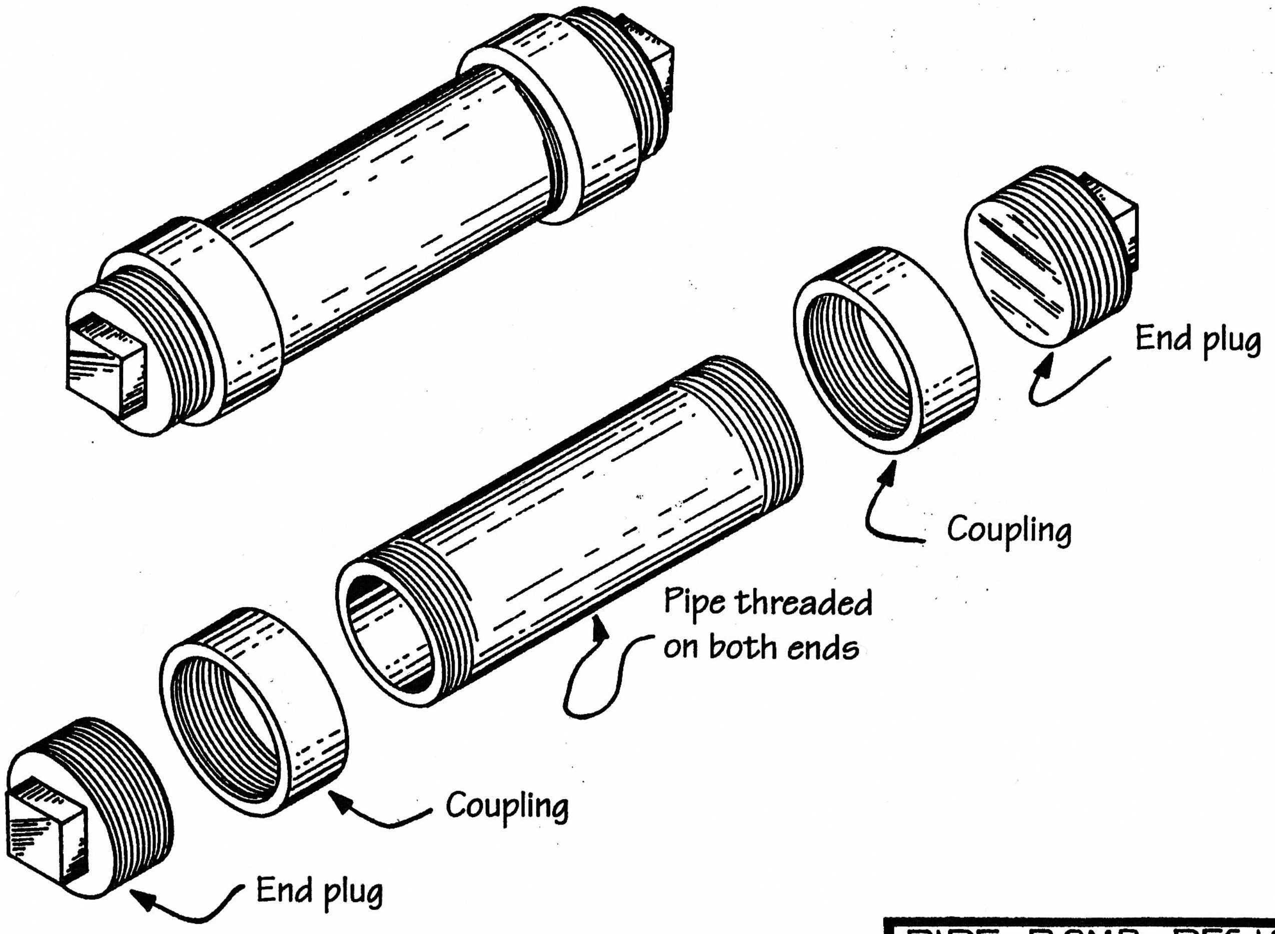
Flashbulb dipped in glue, then rolled in ground-up match heads

Kitchen timer

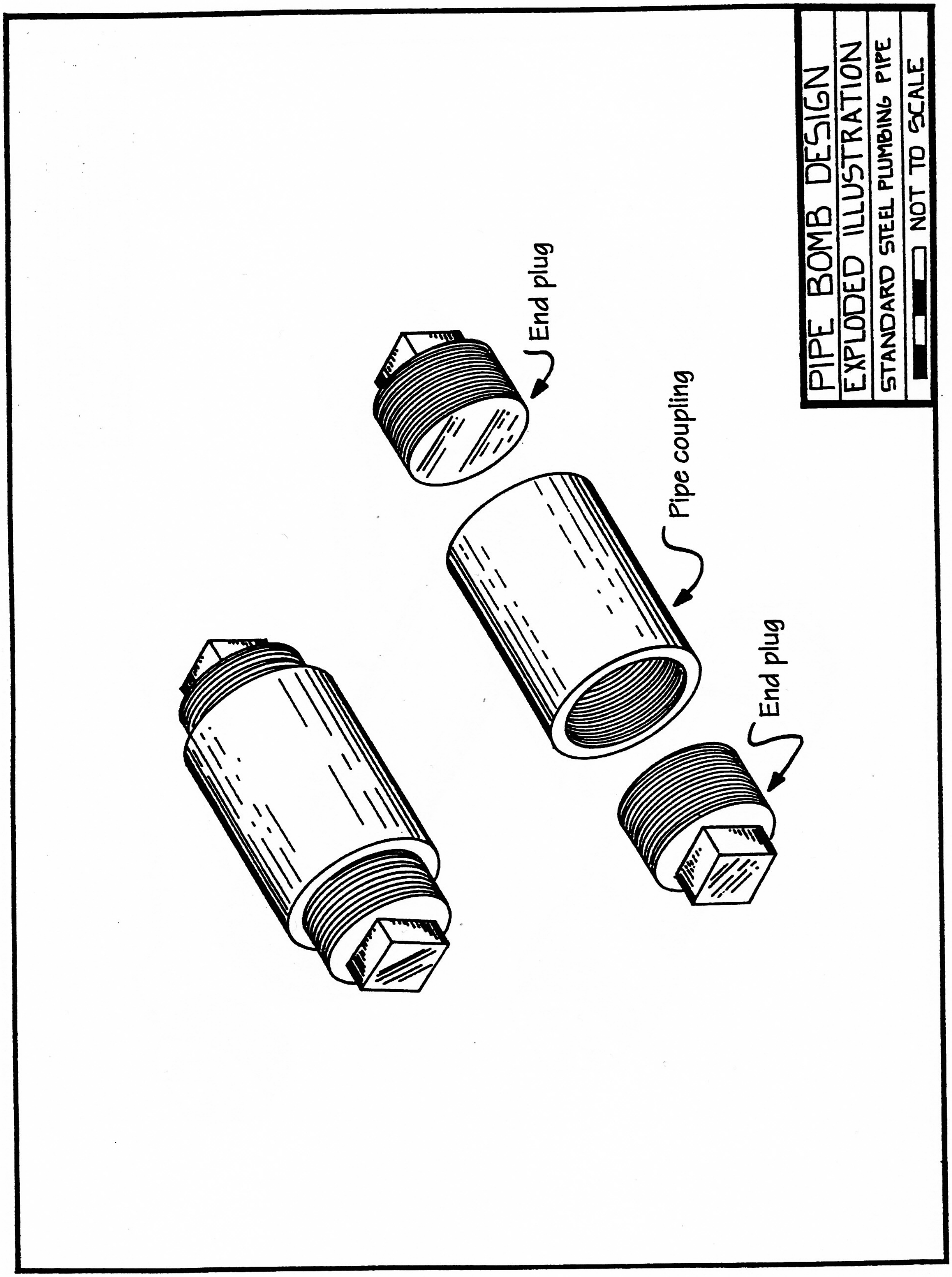
Electric paper bag incendiary

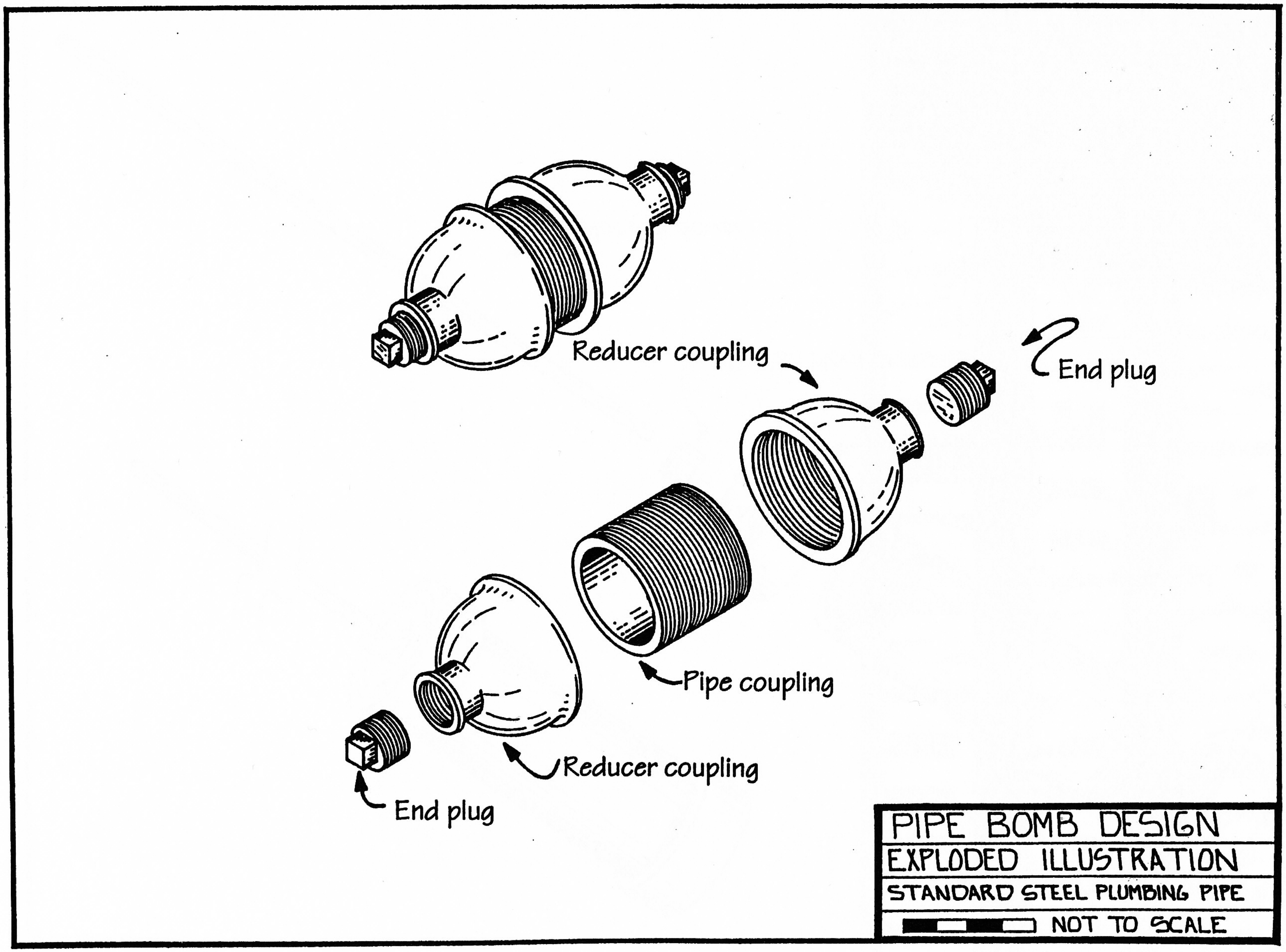
PIPE BOMB BODY DESIGNS

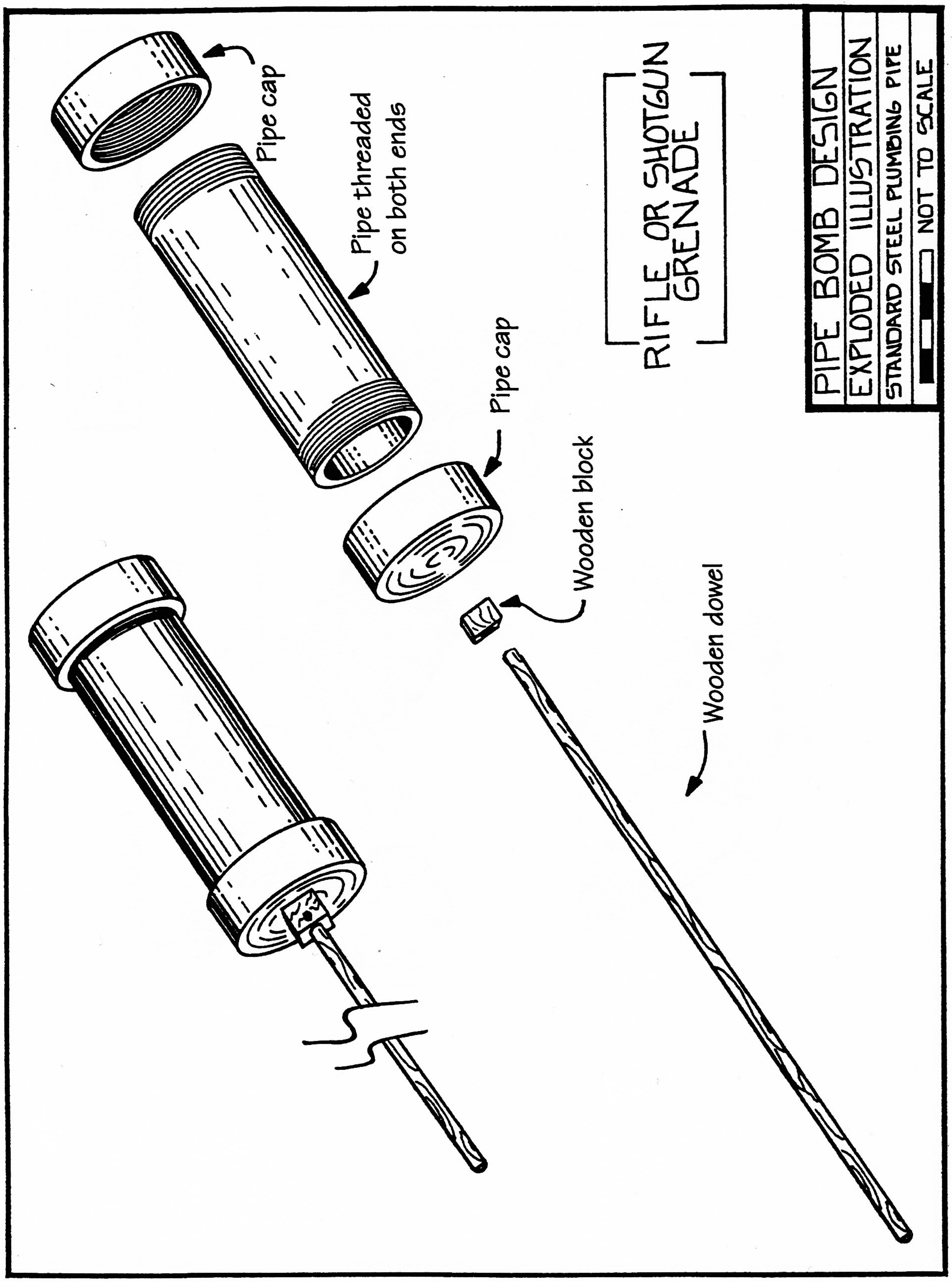

PIPE BOMB DESIGN
EXPLODED ILLUSTRATION
STANDARD STEEL PLUMBING PIPE
NOT TO SCALE
End cap
Pipe threaded on both ends
End cap


End plug
Coupling
Pipe threaded
on both ends
Coupling
End plug

PIPE BOMB DESIGN
EXPLODED ILLUSTRATION
STANDARD STEEL PLUMBING PIPE
NOT TO SCALE


PIPE BOMB DESIGN
EXPLODED ILLUSTRATION
STANDARD STEEL PLUMBING PIPE
NOT TO SCALE
End plug
Pipe coupling
End plug


Reducer coupling
End plug
Pipe coupling
Reducer coupling
End plug
PIPE BOMB DESIGN
EXPLODED ILLUSTRATION
STANDARD STEEL PLUMBING PIPE
NOT TO SCALE


Pipe cap
Pipe threaded on both ends
Pipe cap
Wooden block
Wooden dowel
RIFLE OR SHOTGUN GRENADE
PIPE BOMB DESIGN
EXPLODED ILLUSTRATION
STANDARD STEEL PLUMBING PIPE
NOT TO SCALE

IMPROVISED DETONATORS AND IGNITORS

FLASHCUBE IGNITOR

There are several different types of flashcubes. There should be eight visible metal prongs at the bottom; two prongs side by side for each bulb. Each "pair" fires one of the bulbs. The insulated wire leads are soldered to any of the pairs. The clear plastic shell is removed and discarded. The flashcube will fire either gunpowder or gasoline type bombs.

ELECTRIC FIRECRACKER DETONATOR

Any large firecracker can be used, such as the Black Cat brand. A nichrome model rocket ignitor is obtained from a hobby shop. These usually come in a little plastic bag of five or six and are labeled solar ignitors. The fuse is removed from the firecracker and one of these wire ignitors is inserted in the fuse cavity. Wire nuts are used to attach insulated wire leads to the ends of the wire ignitor. This is now an electric firecracker. These devices are used to ignite gasoline bombs.

FLASHLIGHT BULB IGNITOR AND DETONATOR

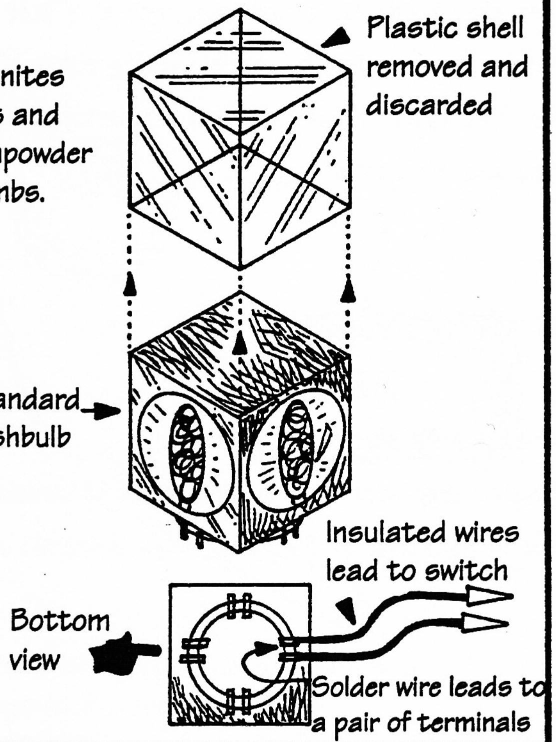
See details on illustration.

NICHROME WIRE/MODEL ROCKET IGNITOR

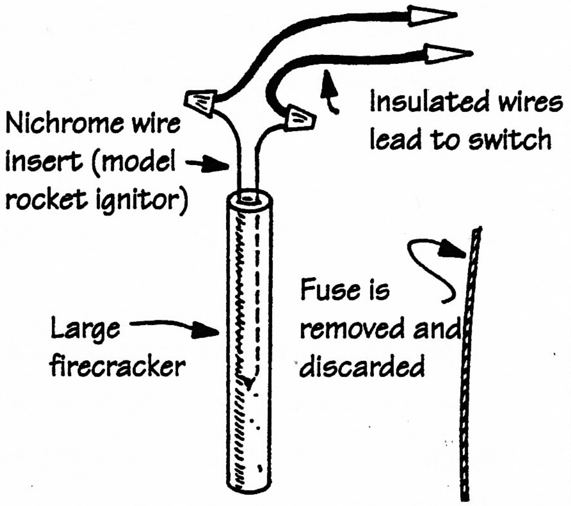
These were discussed above. They will ignite both gunpowder and gasoline devices and work very, very well.

Flashcube ignitor and detonator

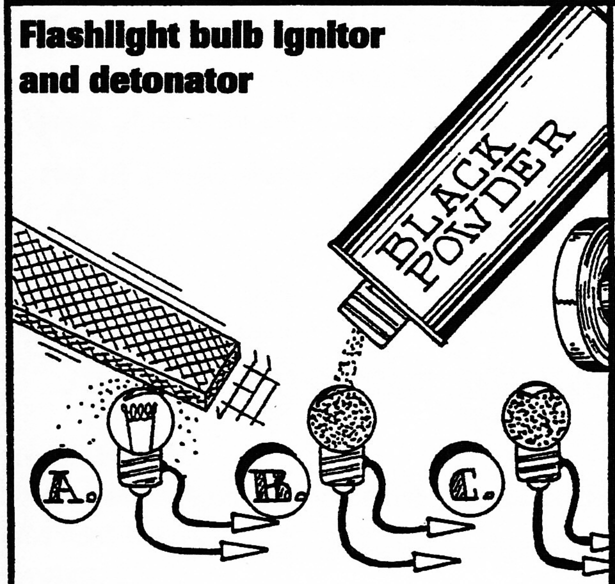
- Ignites gas and gunpowder bombs.


Plastic shell removed and discarded
Standard flashbulb
Insulated wires lead to switch
Bottom view
Solder wire leads to a pair of terminals

Electric firecracker detonator


Nichrome wire insert (model rocket ignitor)
Insulated wires lead to switch
Fuse is removed and discarded
Large firecracker

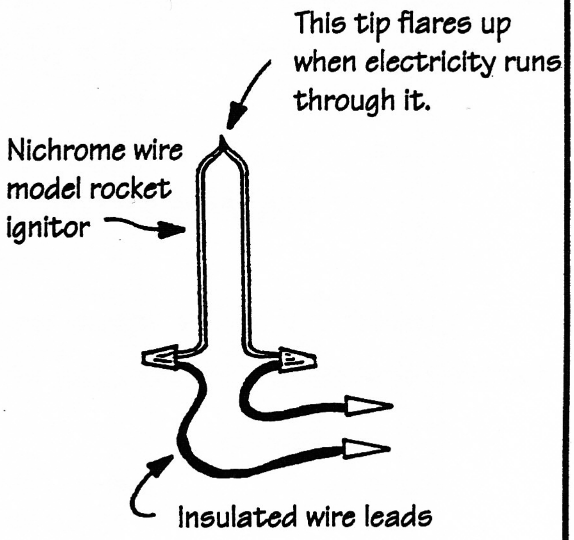
Flashlight bulb ignitor and detonator


BLACK POWDER
A.
B.
C.

A. Hole is filed in bulb; filament is unbroken
B. Bulb is filled with black powder
C. Piece of tape placed over hole.

- Will ignite gasoline and gunpowder devices.

Nichrome wire/model rocket ignitor


This tip flares up when electricity runs through it.
Nichrome wire model rocket ignitor
Insulated wire leads

- Will ignite gasoline and gunpowder devices.

FIRECRACKER IGNITORS AND DETONATORS

These are taped to the outside of a thin-walled glass bottle full of gasoline, such as a beer bottle. Cherry bombs and M-80s can be made into bombs by themselves by simply dipping either of them in glue and rolling in BBs, fishhooks, screws, etc. This added shrapnel turns a simple toy into a powerful mini-grenade. Firecrackers will ignite both pipe and fire bombs.

FLASHBULB IGNITORS AND DETONATORS

These are very effective for igniting and detonating both pipe and fire bombs.

Single flashbulbs are currently hard to find because they were used in older types of cameras, but they can be procured by carefully pulling them out of flashcubes or flashbars. Single flashbulbs are still sold in almost every camera shop.

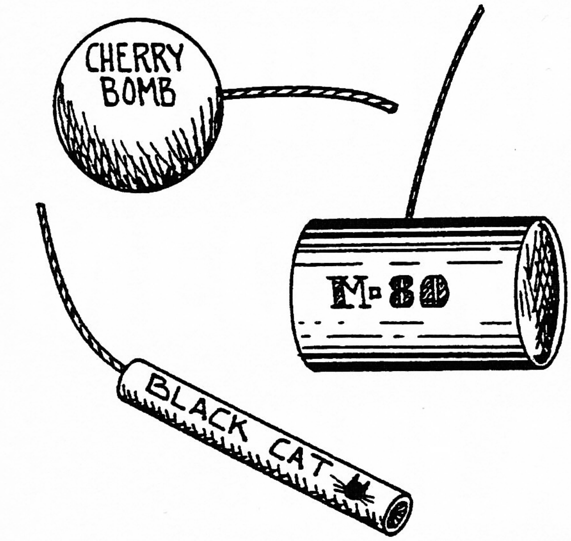
FLASHLIGHT BULB IGNITORS AND DETONATORS II

Another way to rig a flashlight bulb to fire a bomb. See the details in the illustrations. Gluing match heads on the bare bulb filiment is optional. Other options, not shown, include dipping the bare filiment in glue and carefully rolling it in gunpowder or crushed match heads.

HOMEMADE ELECTRIC AND NONELECTRIC BLASTING CAPS

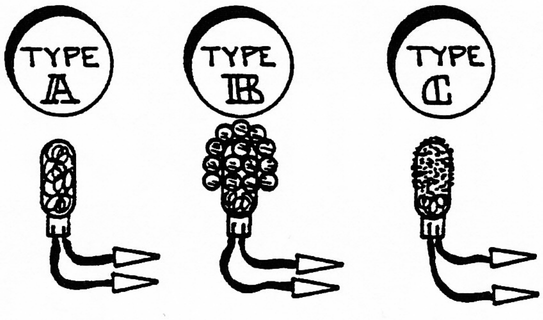
I wouldn't trust these to detonate conventional explosives if dependability is needed. The illustrations show how they are made. They will ignite gasoline and gunpowder quite well.

Firecracker ignitors and detonators


CHERRY BOMB
M-80
BLACK CAT

- These will ignite both gasoline and gunpowder bombs.

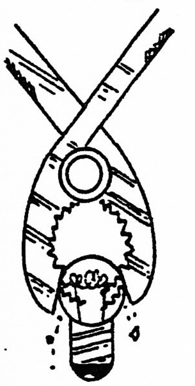
Flashbulb ignitors and detonators


TYPE A
TYPE B
TYPE C

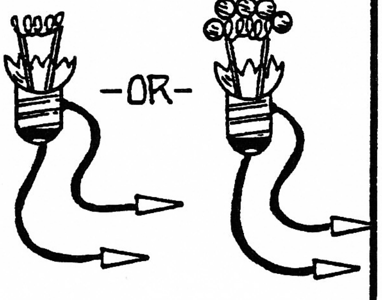
Type A: A flashbulb by itself.
Type B: A flashbulb with match heads glued on it.
Type C: A flashbulb with ground-up powdered match heads glued on it.

- All of these will ignite gasoline and gunpowder bombs.

Flashlight bulb ignitors and detonators II

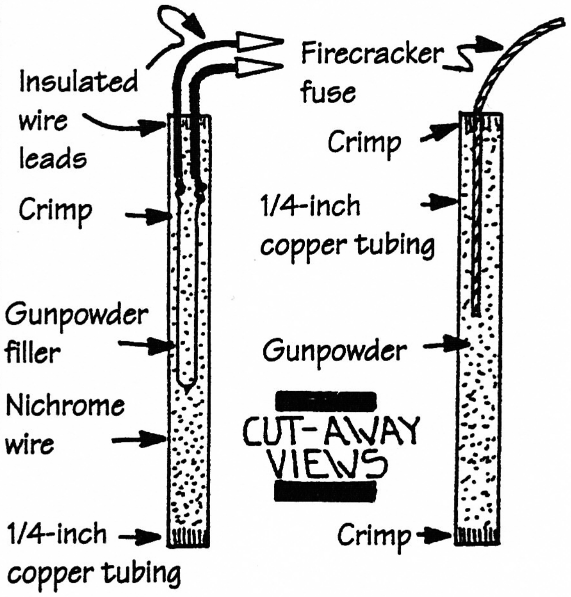


Glass bulb is broken carefully; filament is not broken



- Broken bulb is used by itself or with match heads glued to filament.
- Either one will ignite gasoline and gunpowder.

Homemade electric and nonelectric blasting caps (cutaway views)


Insulated wire leads
Crimp
Gunpowder filler
Nichrome wire
1/4-inch copper tubing
Firecracker fuse
Crimp
1/4-inch copper tubing
Gunpowder
CUT-AWAY VIEWS
Crimp

- These will ignite gasoline and gunpowder bombs as well as some conventional explosives.

IMPROVISED SWITCHES, FIRING MECHANISMS, AND DELAY SYSTEMS

CLOTHESPIN TRIPLINE SWITCH

This switch can be used in a wide varity of devices and situations. For example, the clothespin can be screwed to a door by driving the screw through the hole in the spring. Then the string is run across the closed door and affixed to the wall. When the door is opened, the wooden wedge is pulled out and the bomb explodes. This type of switch can also be used to boobytrap a suitcase or box so that when the lid is opened the bomb will explode.

CLOTHESPIN AND CIGARETTE DELAY

This type of switch can provide a five- to seven-minute delay. The cigarette burns down and through the string. When the string pops open, the jaws on the clothespin close and the metal thumbtacks touch and complete the electrical circuit. The string can be substituted with firecracker fuse.

A similar delay can be made with a piece of soft led solder. No cigarette is involved. The clothespin is squeezed open and solder wrapped once or twice around the ends (where the string is in the illustration). The constant pressure of the spring will, over time, spread the solder apart and close the circuit. The exact delay is uncertain.

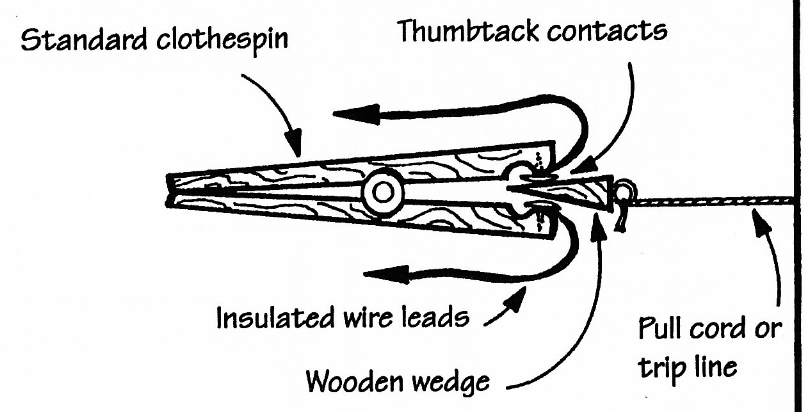
CLOTHESPIN PRESSURE SWITCH

Again, this has many uses. Example: the switch is taped to one side of a pipe bomb and buried in an area where the target is known to walk. The clothespin is situated slightly below ground level. When the target walks on the clothespin, his weight closes the contacts together and detonates the device.

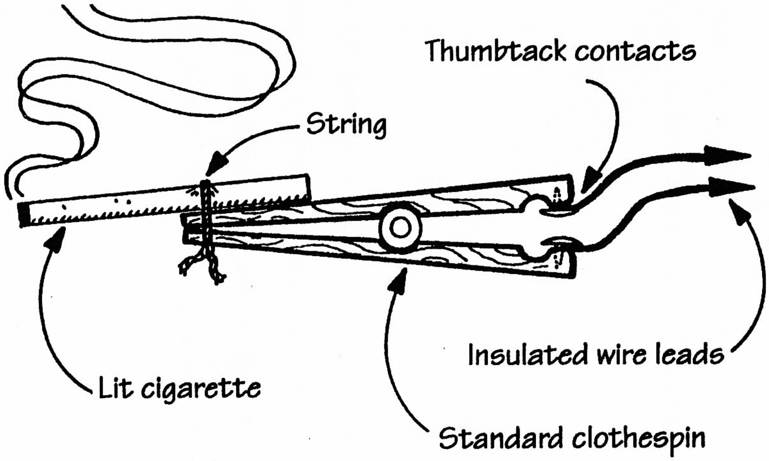
CLOTHESPIN RELEASE-OF-PRESSURE SWITCH

This switch is normally kept open by one string (such as thin, strong monofiliment fishing line) attached to the ceiling and a weight attached to the other string. If someone picks up the weight, the jaws of the mousetrap close and complete the electrical circuit. If the line is thin enough and the lighting in the room is dimmed, the target could become curious as to what is keeping the object (weight) suspended and pick it up. As soon as he lifts the object, the circuit closes.

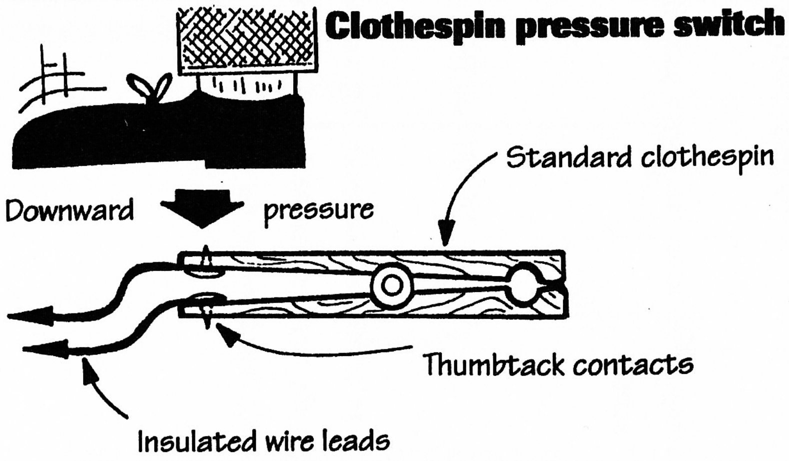
Clothespin trip line switch


Standard clothespin
Thumbtack contacts
Insulated wire leads
Wooden wedge
Pull cord or trip line

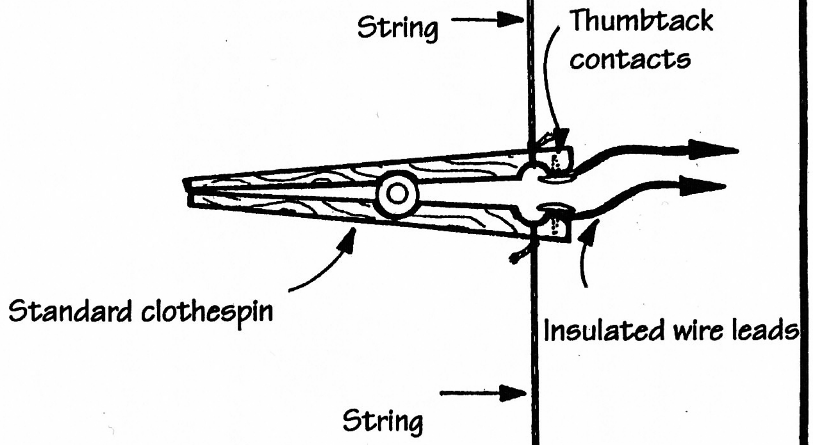
Clothespin and cigarette delay switch


Thumbtack contacts
String
Insulated wire leads
Lit cigarette
Standard clothespin

Clothespin pressure switch


Standard clothespin
Downward
pressure
Thumbtack contacts
Insulated wire leads

Clothespin release-of-pressure switch


String
Thumbtack contacts
Standard clothespin
Insulated wire leads
String

UNDER-THE-TIRE CLOTHESPIN SWITCH

Used to blow up the target in his car. The clothespin is wedged under the tire so the jaws are spread open. Then the arming switch is flipped to the "on" position. The pipe bomb is often attached with strong magnets under the car's gas tank.

TEST TUBE AND BALL BEARING SWITCH

This type of switch is used in antitilt devices. If the target picks up a box containing this switch and the box is tilted in any direction, the steel ball in the test tube rolls over and touches the two metal pins in the cork. This action closes the circuit and detonates the bomb. This switch can be found attached to a door knob on the opposite side of the door where the target will enter. Twisting the door knob closes the circuit.

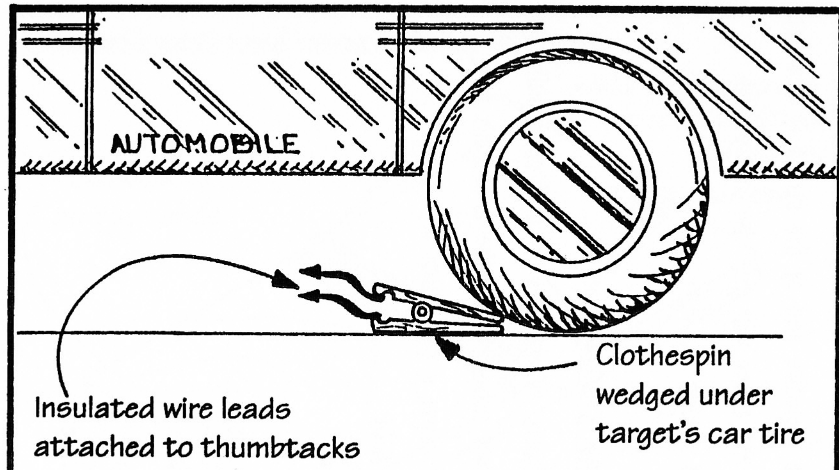
TOGGLE SWITCH WITH TRIP WIRE

The string is run across the target's path. His leg will cause the string to pull the toggle switch into the "on" position.

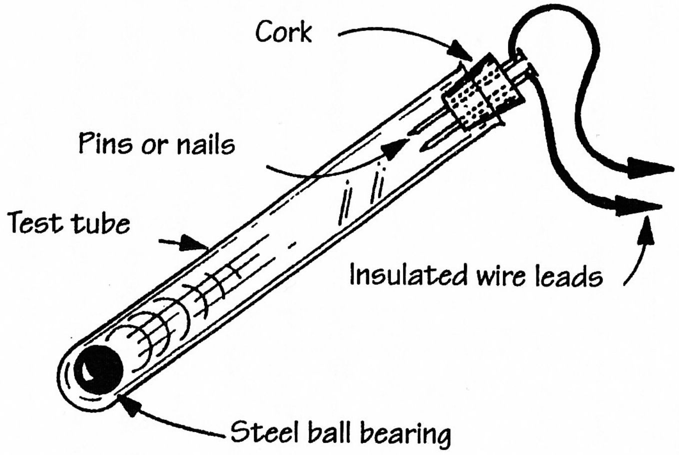
DOUBLE-ACTION PVC PIPE SWITCH

This is an antidisturbance switch. The switch and the entire bomb is concealed in a box or briefcase. When the target moves the box, the ball bearing swings in either direction and touches a pair of pins (contacts). This detonates the bomb.

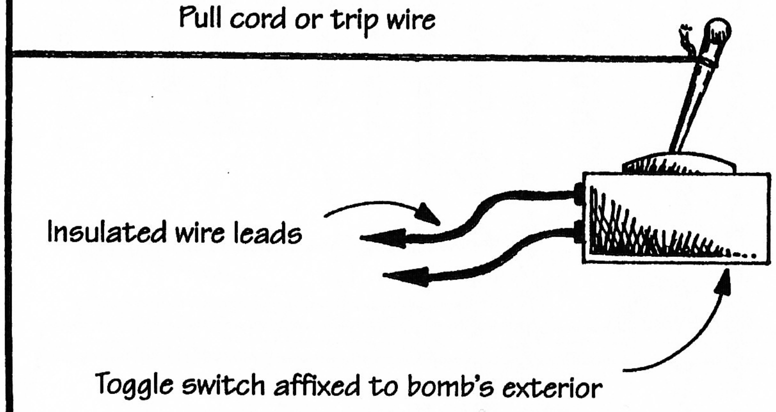
Under-the-tire clothespin switch


AUTOMOBILE
Insulated wire leads attached to thumbtacks
Clothespin wedged under target's car tire

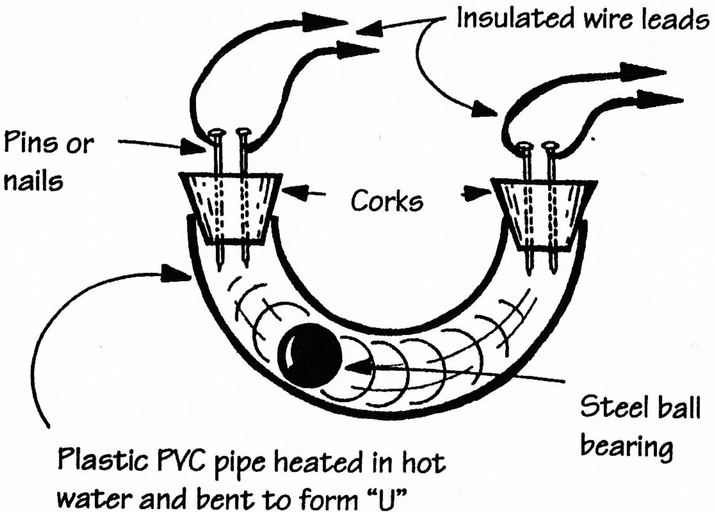
Test tube and ball bearing switch


Cork
Pins or nails
Test tube
Insulated wire leads
Steel ball bearing

Toggle switch with trip wire switch


Pull cord or trip wire
Insulated wire leads
Toggle switch affixed to bomb's exterior

Double-action PVC pipe switch


Insulated wire leads
Pins or nails
Corks
Steel ball bearing
Plastic PVC pipe heated in hot water and bent to form "U"

OMNIDIRECTIONAL MOUSETRAP SWITCH

This switch operates in either direction—pressure or release of pressure. As a pressure switch, the mousetrap could be wedged under the target's car seat. When he sits down, the fly bar is depressed further and completes the circuit. As a release-of-pressure switch, a piece of wood is wedged between the fly-bar and the thumbtack.

TRIP WIRE AND MOUSETRAP SWITCH

The string can be used as either a pull cord or trip wire. All the pieces of the mousetrap except the fly-bar are removed with pliers. A 1/16th-inch hole is drilled opposite where the fly-bar normally comes to rest. A piece of strong coat hanger wire is run through this hole and bent, as shown in the illustration. This wire pivots in place. The fly-bar is bent back and the wire turned to retain it. A string is attached to the wire on the underside of the mousetrap. A single thumbtack and insulated wire lead are attached opposite the retained fly-bar. The other insulated wire lead is attached to the coil on the fly-bar. When the string is pulled, the fly-bar is released and completes the electrical circuit.

TIME-DELAY MOUSETRAP SWITCH

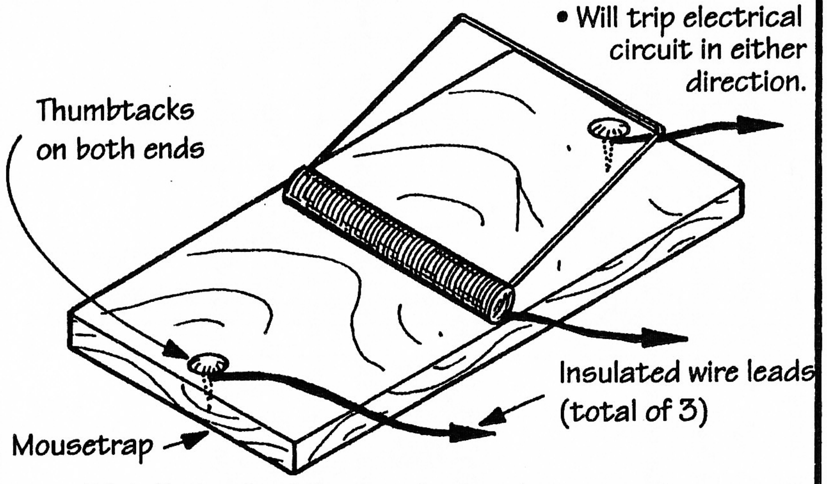
A mousetrap and a kitchen timer are screwed to a pine board. A string is attached to the top of the timer knob and the knob is twisted to start the timer. The opposite end of the string is attached to the small retaining block on the "armed" mousetrap. In time, the timer will pull the string with enough pressure to trip the mousetrap and complete the electrical circuit.

TWO-COMPONENT HYPERGOLIC FIRE STARTER

This ingenious device has many uses. As the illustration shows, a trip wire or pull cord pulls the pin retaining the fly-bar. The fly-bar flies over and crushes both test tubes. When the chemicals mix, a fire is created. There are many chemicals which, when mixed, will cause a fire, such as:

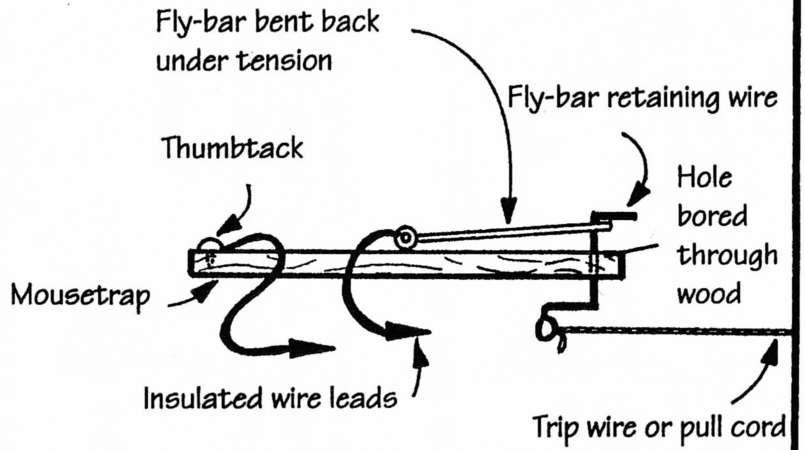
Sulfuric Acid and Hydrochloric Acid
Sulfuric Acid and Match Heads
Nitric Acid and Turpentine
Sugar and Potassium Permanganate
Water and Elemental Sodium
Sulfuric Acid and Table Sugar
Sulfuric Acid and Potassium Perchlorate

Omnidirectional mousetrap switch

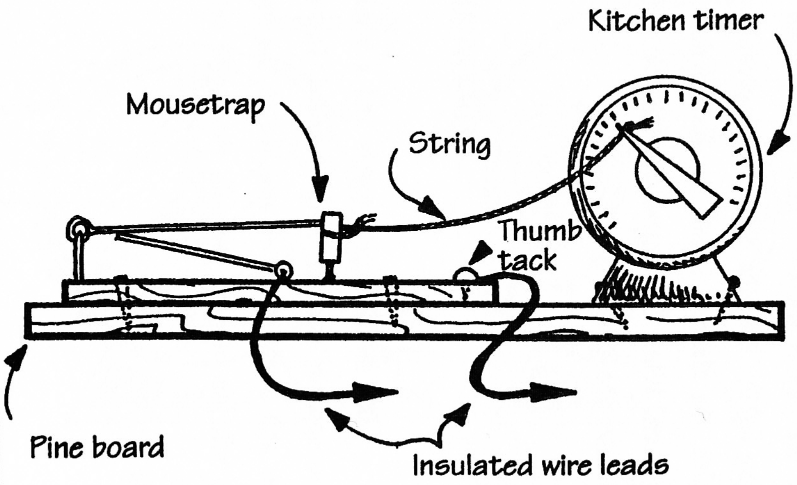

Thumbtacks
on both ends
Insulated wire leads
(total of 3)
Mousetrap

- Will trip electrical circuit in either direction.
- With fly-bar bent back under tension, mousetrap is wedged under car seat, for example.

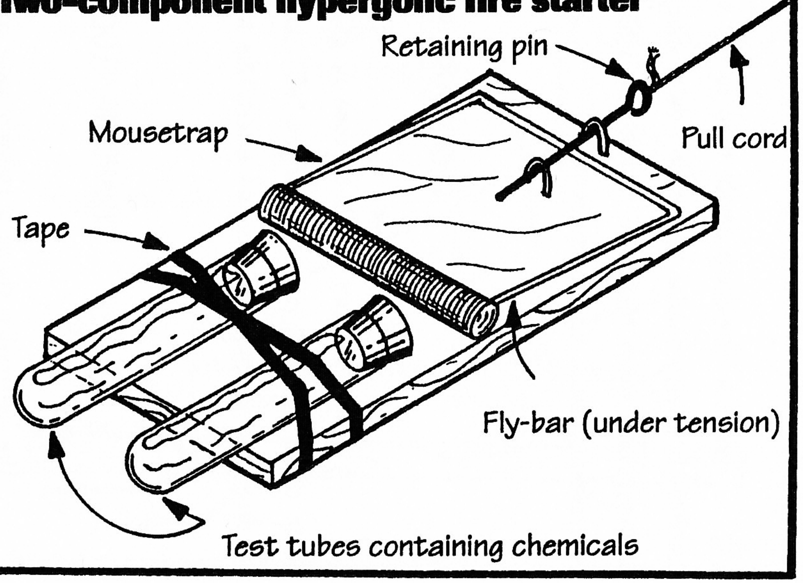
Trip wire and mousetrap switch


Fly-bar bent back
under tension
Fly-bar retaining wire
Thumbtack
Hole
bored
through
wood
Mousetrap
Insulated wire leads
Trip wire or pull cord

Time-delay mousetrap switch


Kitchen timer
Mousetrap
String
Thumb
tack
Pine board
Insulated wire leads

Two-component hypergolic fire starter


Retaining pin
Mousetrap
Pull cord
Tape
Fly-bar (under tension)
Test tubes containing chemicals

TIME-DELAY SHOTGUN SHELL FIRING MECHANISM

This is a time-delay device used to fire a shotgun shell, either by itself or into a bottle of gasoline. It is very similar to the time-delay mousetrap switch. The mousetrap fly-bar is bent with a pair of needle-nose pliers to form a striker. This striker fires the shotgun shell when the kitchen timer pulls the retaining block on the mousetrap.

CLOCKWORK/MERCURY BULB DELAY

A simple mercury switch is taped or glued to a prewound alarm winding key on the back of an alarm clock. The bulb is in the upright "off" position. When the alarm clock sounds the alarm at a preset time, the winding key tilts and inverts the mercury bulb, which completes the electrical circuit.

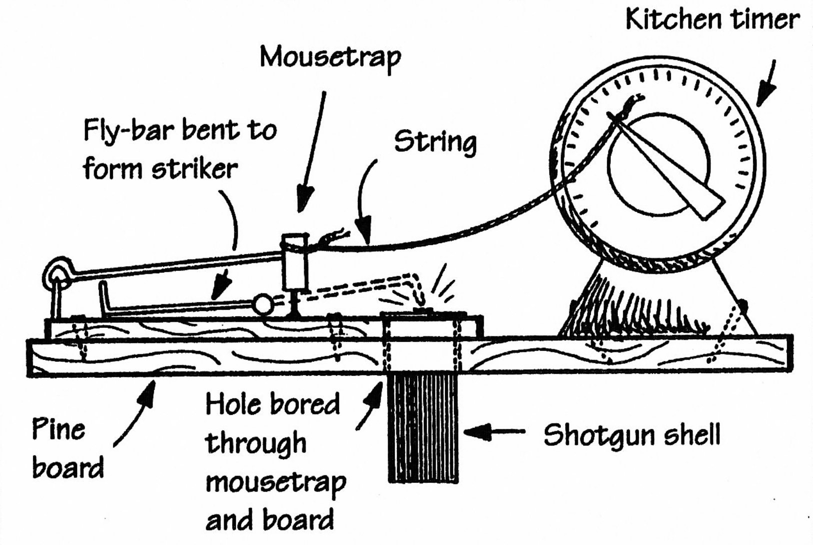
EXPANDING CLOCK SPRING DELAY SWITCH

The illustration shows a cutaway view of the back of a wind-up alarm clock. A hole is drilled into the side of the clock next to the metal alarm wind-up spring. A screw is inserted so it touches the spring lightly. Now the alarm key is wound so the spring is tight and no longer touches the screw. Prior to this, the alarm is set to the desired time. Insulated wire leads are attached to the winding key and the screw. When the alarm goes off, the spring unwinds and comes into contact with the screw. This detonates the device.

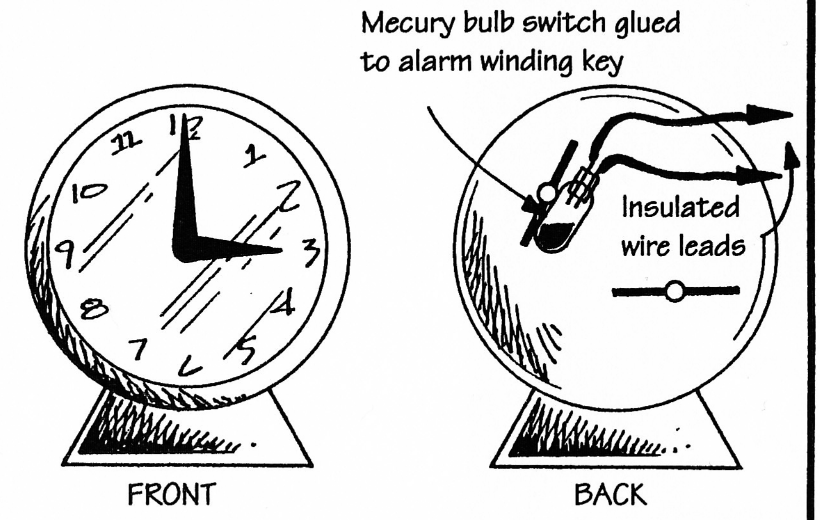
CLOCKWORK/TOGGLE SWITCH DELAY

This switch uses a toggle and a wind-up alarm clock. The clock and toggle switch are screwed on to opposite ends of the pine board. The alarm clock key is wound and a string is tied to it. The other end of the string is attached to the toggle switch, which is in the "off" position. When the alarm goes off, the winding key pulls the toggle switch into the "on" position and detonates the bomb.

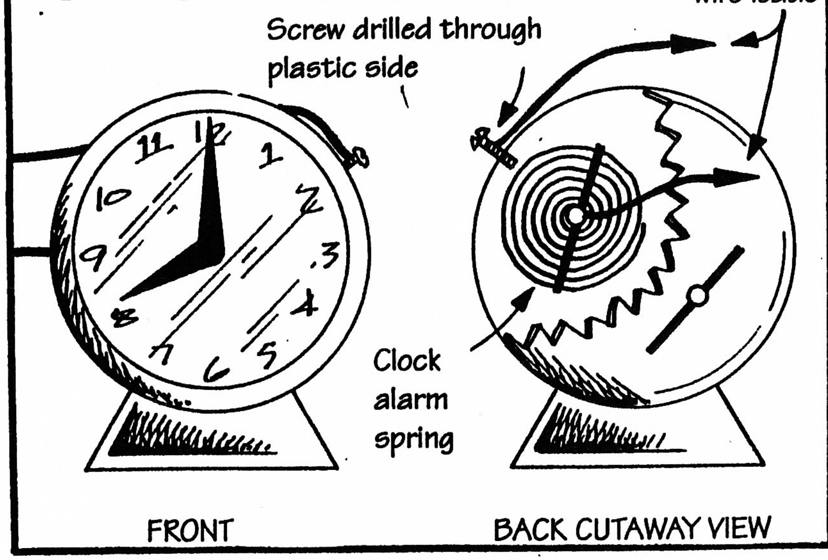
Time-delay shotgun shell firing mechanism


Kitchen timer
Mousetrap
Fly-bar bent to form striker
String
Pine board
Hole bored through mousetrap and board
Shotgun shell

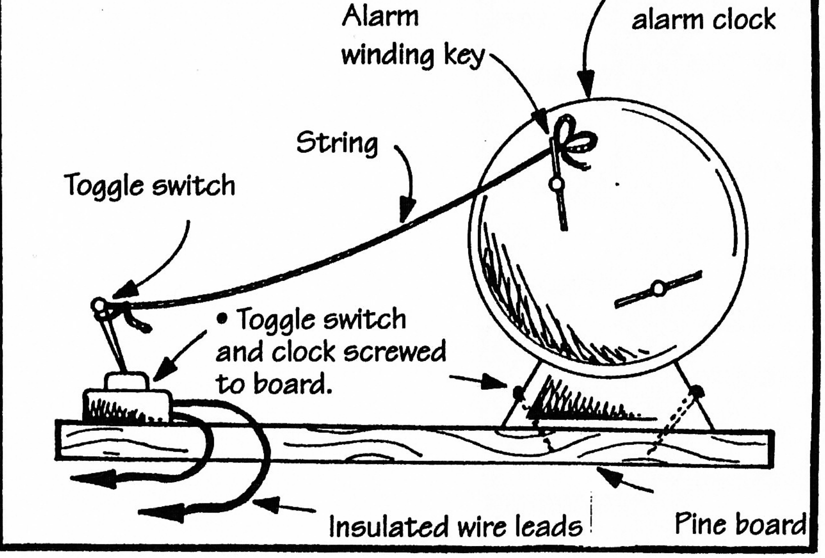
Clockwork/mercury bulb delay


Mecury bulb switch glued to alarm winding key
Insulated wire leads
FRONT
BACK

Expanding clock spring delay switch

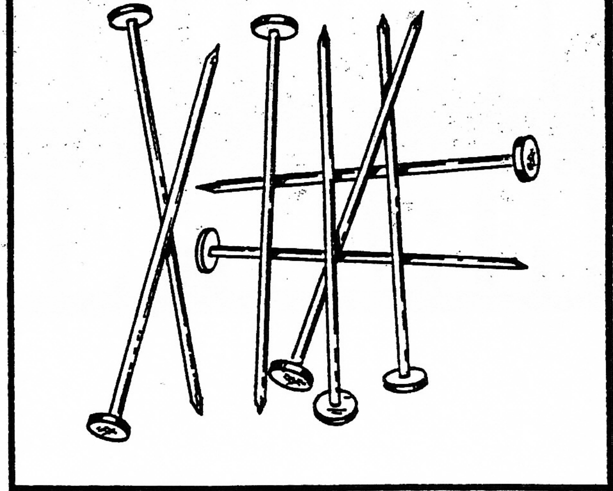

Insulated wire leads
Screw drilled through plastic side
Clock alarm spring
FRONT
BACK CUTAWAY VIEW

Clockwork/toggle switch delay

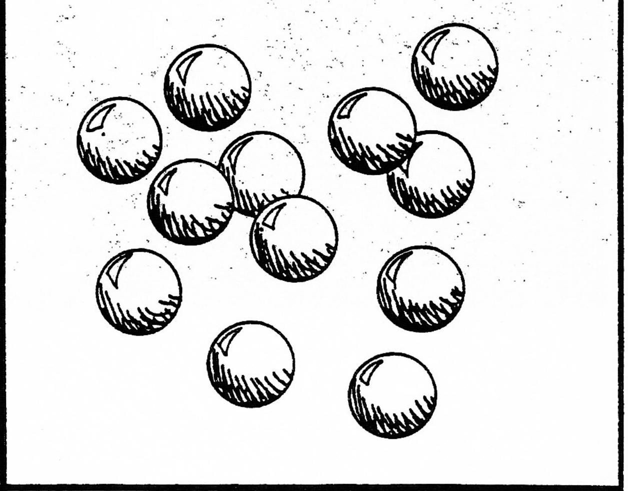

Back of alarm clock
Alarm winding key
String
Toggle switch
• Toggle switch and clock screwed to board.
Insulated wire leads
Pine board

IMPROVISED SHRAPNEL

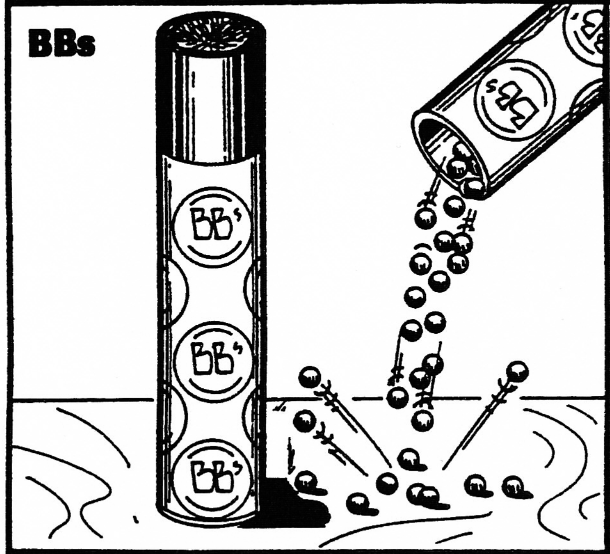
Nails



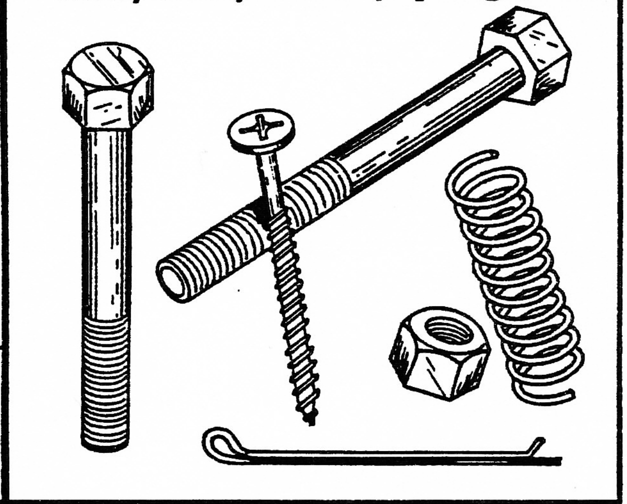
Steel ball bearings



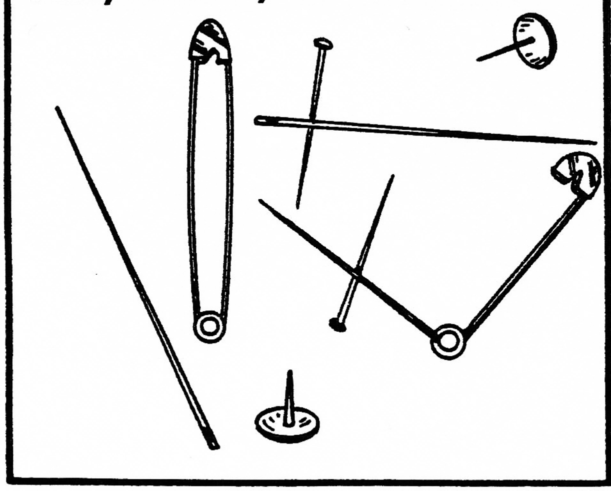
BBs


BB's
BB's
BB's
BB's
BB's

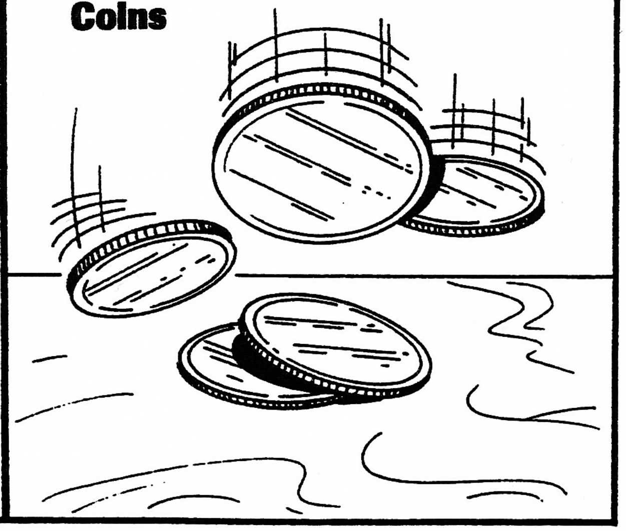
Nuts, bolts, screws, springs, etc.



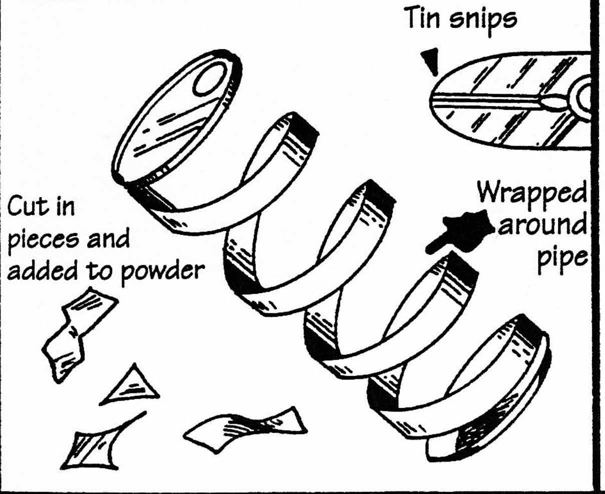
Pins, needles, and thumbtacks



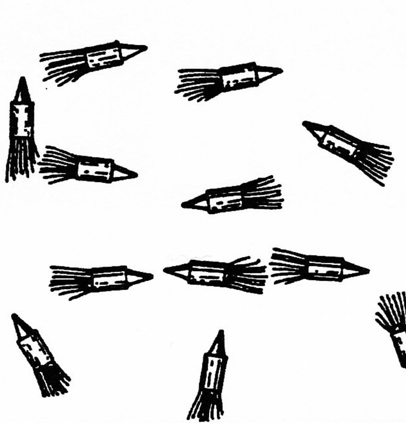
Coins



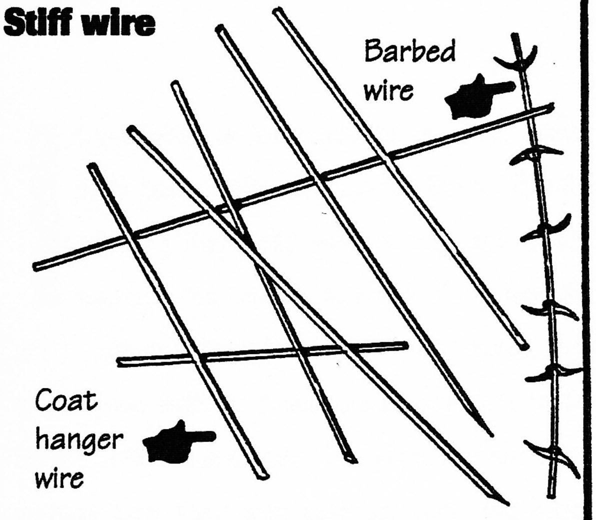
Beer and soda cans


Tin snips
Cut in pieces and added to powder
Wrapped around pipe

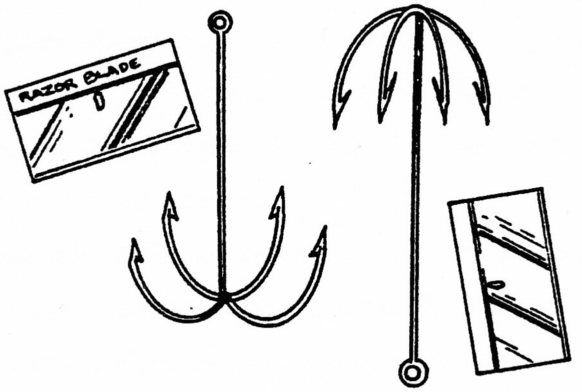
CO2 air gun darts



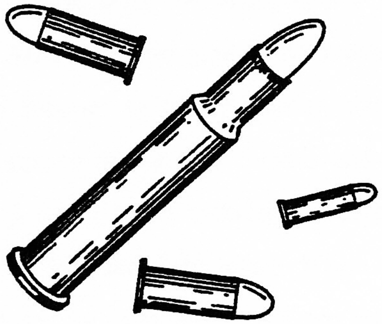
Stiff wire


Barbed wire
Coat hanger wire

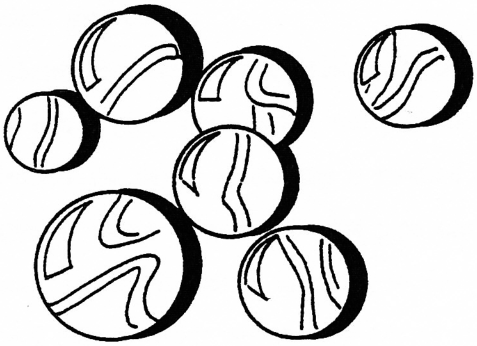
Fish hooks and razor blades


RAZOR BLADE

Bullets



Marbles



PROFESSIONAL PIPE BOMBS

If you want to learn how to construct bombs safely and legally, go to the sources who do it on a daily basis: Hollywood Special Effects Technicians (SF/X). It is extremely rare to ever hear of anything they build going wrong, and that's because they always think safety. SF/X men construct sophisticated bombs, and they do it day after day without accidents.

Almost everything a SF/X man builds is homemade. While he may use det cord (aka Primacord) to take out walls or conventional explosives to bring down buildings, what you see in the movie is almost always homemade. The giant fireballs that shoot out of windows are nothing more than plastic garbage bags filled with gasoline, cork, and balsa wood. This is detonated with a small bag filled with black powder and tightly taped with black electrical tape. (This device is seen in the illustration Professional Pipe Bomb #1. While the SF/X man uses light wood for his effect so no shrapnel is created, I have illustrated the prepared charge in a standard pipe bomb.)

While the two pipe bomb construction methods shown here are not completely safe, they are infinitely superior to simply pouring black powder straight into a pipe. There is less worry about the powder getting in the pipe threads and detonating accidentally the device as the cap is screwed on.

A smart bomb technician always wets the pipe threads before he screws on the pipe cap(s). Wet powder is "less likely" to ignite. When constructing a bomb, nothing is written in stone, so I'm not going to say wet gunpowder will not ignite. You don't see a pair of hands constructing any of the devices in this manual not because the author can't draw hands. No, the reason is because only idiots construct bombs with their hands. All bombs should be constructed with mechanical arms behind a heavy 1-inch steel wall. Never construct anything in this book with bare hands! NEVER!

The pipe and end caps used for any bomb should always be kept on a separate work bench away from the black powder. It's just too easy for a single grain of powder to find its way onto the pipe or end cap threads. And that's all it takes—a single grain of gun powder—and your wife or mother will be trying to figure if you look good in an oak or a mahogany box.

If you want to learn the fine art of the pyrotechnician and/or explosives technician, start at the local library. There are some fine books on Hollywood special effects that provide highly technical information. This only used to be taught to those lucky enough to convince an SF/X man to take them on as journeymen. A good city library will have most, if not all, of these books.

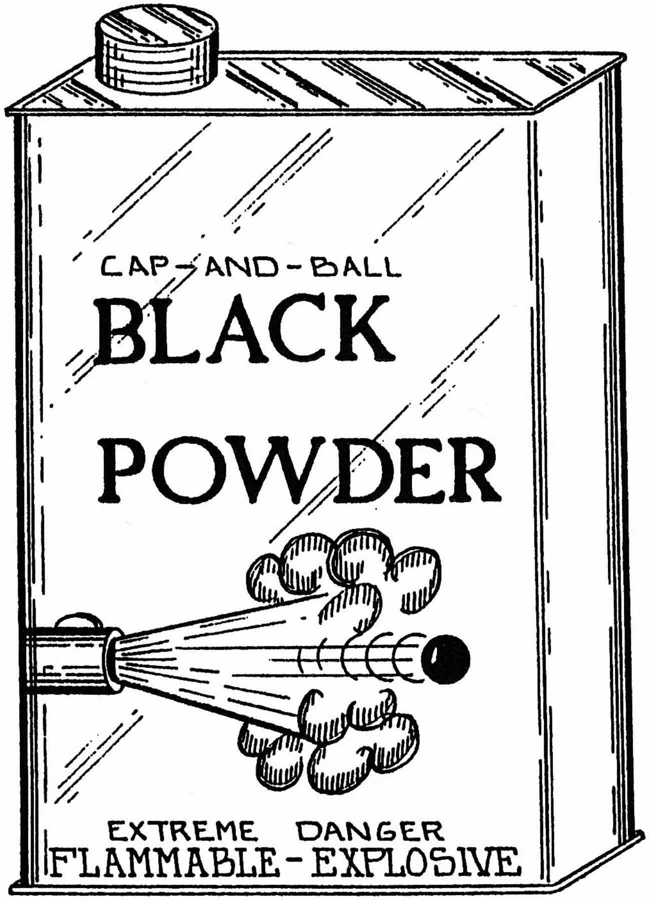
The next step would be to take local community college courses on stage craft and work your way on up from there. If you're good, use the college instructors as references and try to get into television or movies. I don't know of any schools that teach this art, but I suppose there are a few. A good SF/X man is the best bomb instructor there is.

As shown above, there is a legal way to construct and detonate improvised explosive devices. If you enjoy the hobby of bomb building, I hope you point your talents in the right direction. Prison is not fun.

- Black powder is more powerful than gunpowder.
- Flash powder is more powerful than black powder.

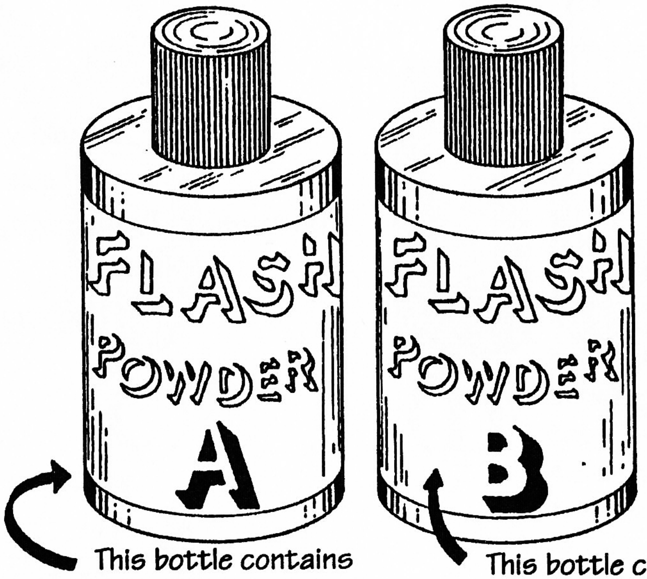
TWO-COMPONENT THEATRICAL PHOTO FLASH POWDER

- Available from theatrical suppliers, magician supply outlets, and some gun shops.
- Both components are inert unitl mixed as per instructions on bottle.
- Flash powder is used in cherry bombs.


CAP-AND-BALL
BLACK
POWDER
EXTREME DANGER
FLAMMABLE-EXPLOSIVE

BLACK POWDER

- Burns faster and provides for a much more powerful device than gunpowder.


FLASH
POWDER
A
FLASH
POWDER
B

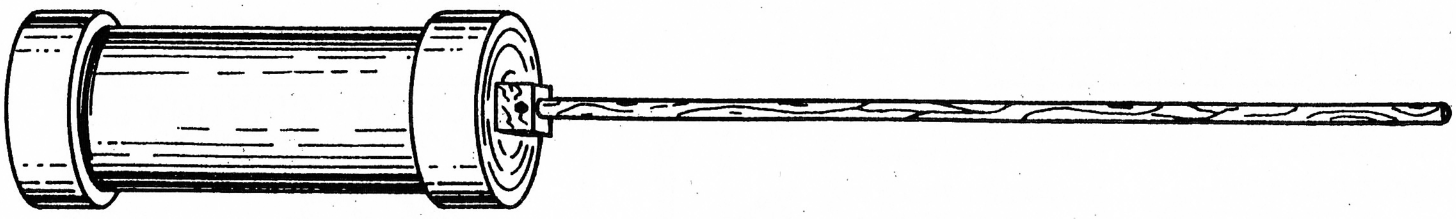
This bottle contains powdered magnesium

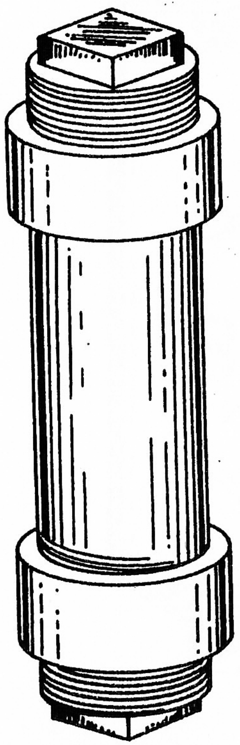
This bottle contains potassium nitrate

PIPE BOMB FILLERS

- EITHER POWDER USED IN BOMBS.
- FLASH POWDER IS PREFERED.

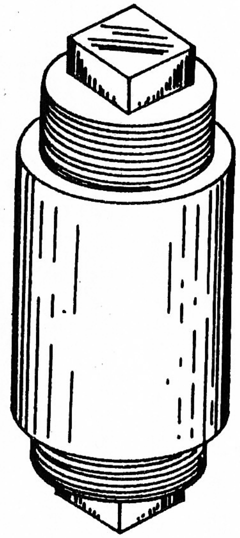
▬▭▬▭ NOT TO SCALE



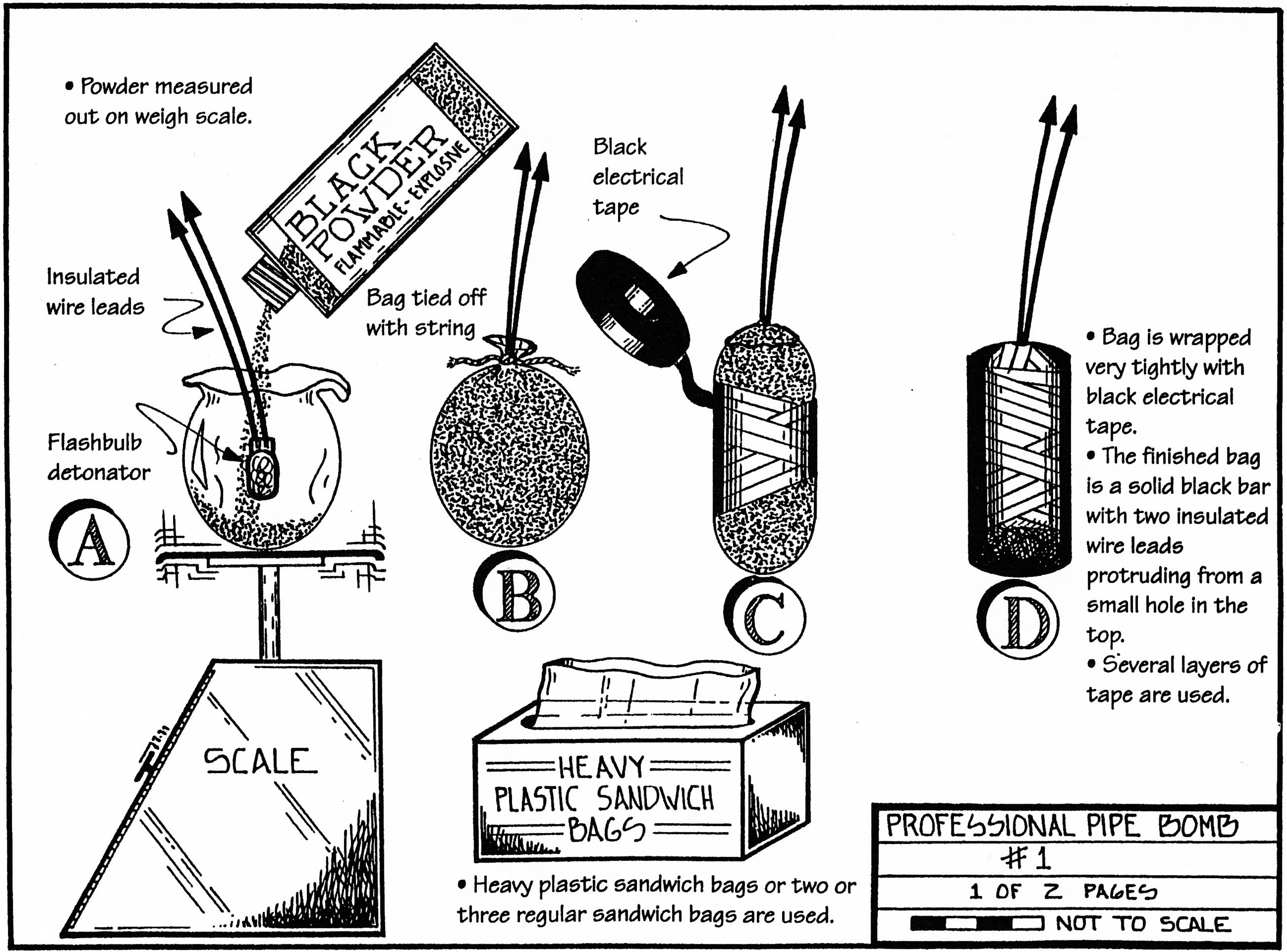


ATOMIC PIPE BOMB FILLER

Mixed under strict laboratory conditions
and used as pipe bomb filler:
10 parts flash powder
3 parts titanium



ATOMIC PIPE BOMB
BRILLIANT FLASH.
EXTREMELY DANGEROUS TO MAKE.
NOT TO SCALE

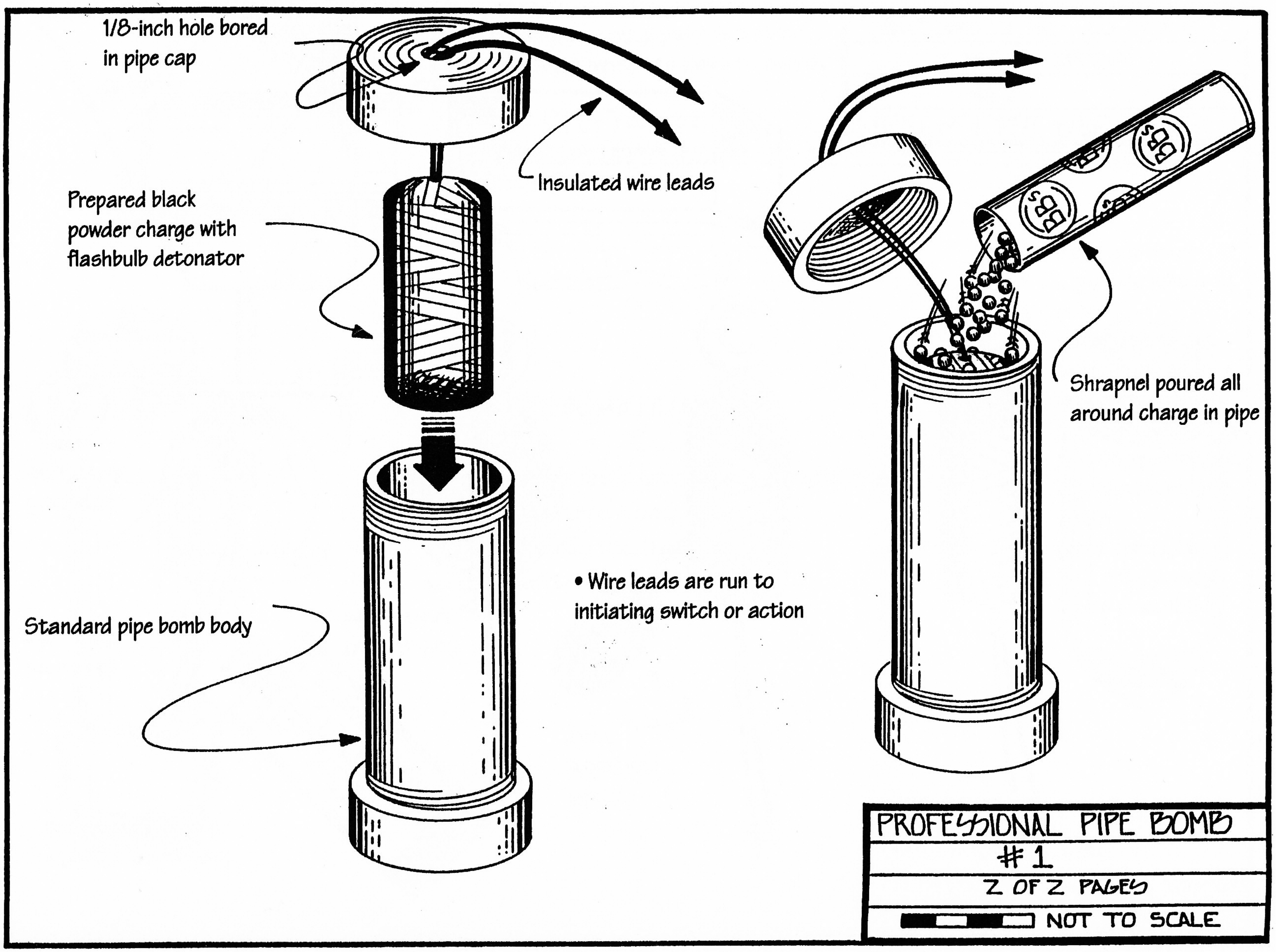

BLACK POWDER
FLAMMABLE - EXPLOSIVE
Insulated wire leads
Flashbulb detonator
Bag tied off with string
Black electrical tape
SCALE
HEAVY PLASTIC SANDWICH BAGS
A
B
C
D

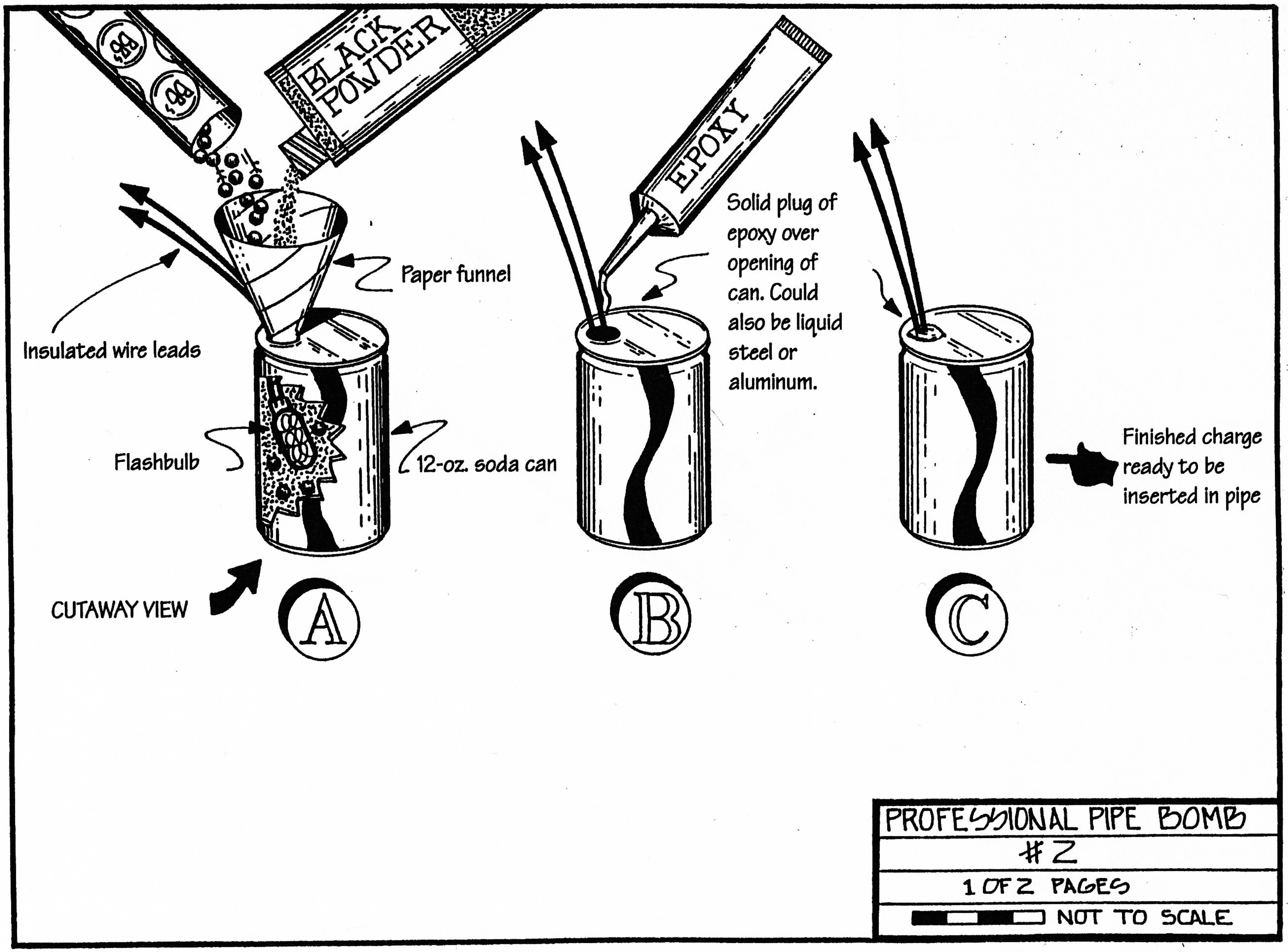
- Powder measured out on weigh scale.

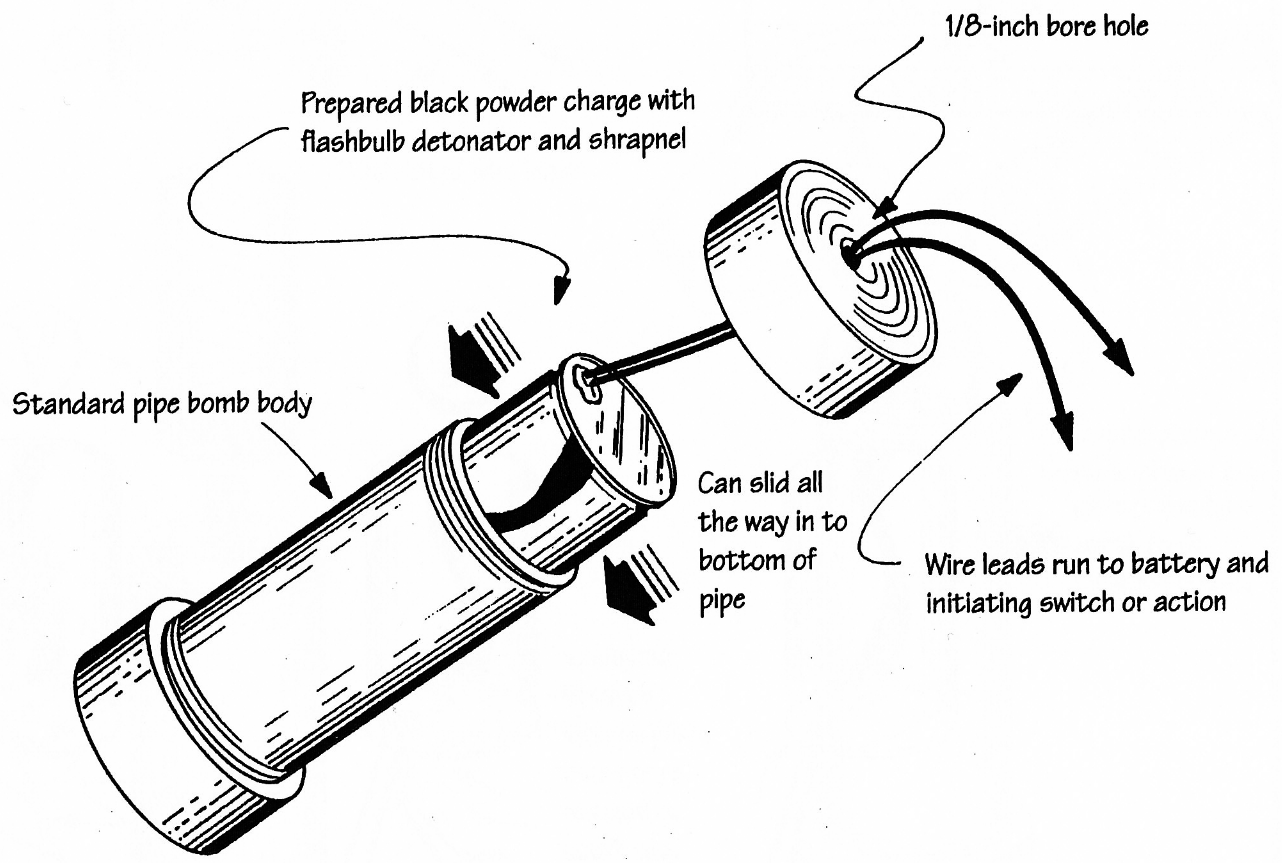
- Heavy plastic sandwich bags or two or three regular sandwich bags are used.

- Bag is wrapped very tightly with black electrical tape.
- The finished bag is a solid black bar with two insulated wire leads protruding from a small hole in the top.
- Several layers of tape are used.

PROFESSIONAL PIPE BOMB
#1
1 OF 2 PAGES
NOT TO SCALE

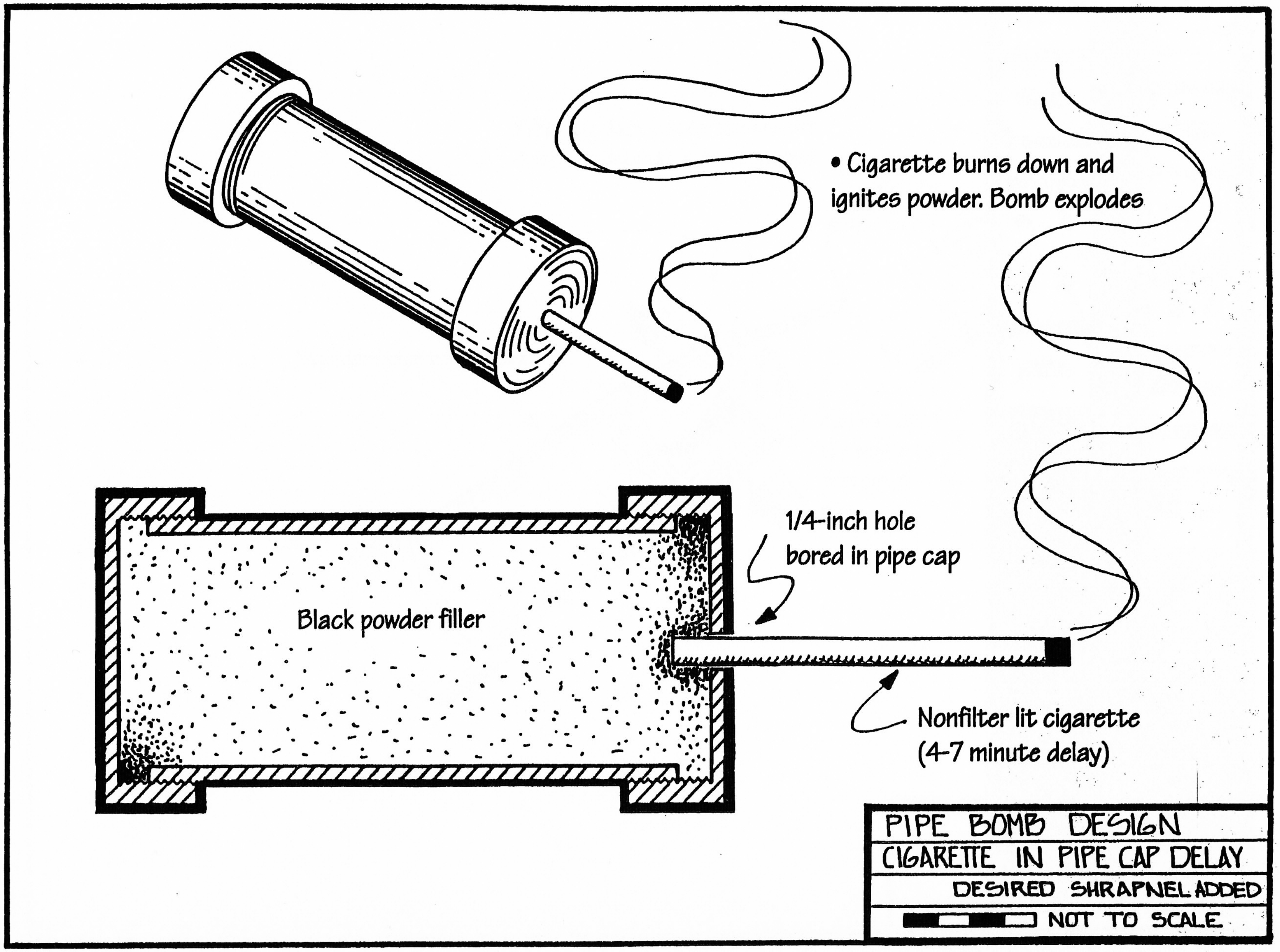

1/8-inch hole bored in pipe cap
Insulated wire leads
Prepared black powder charge with flashbulb detonator
Standard pipe bomb body
• Wire leads are run to initiating switch or action
BBs
Shrapnel poured all around charge in pipe
PROFESSIONAL PIPE BOMB
#1
2 OF 2 PAGES
NOT TO SCALE

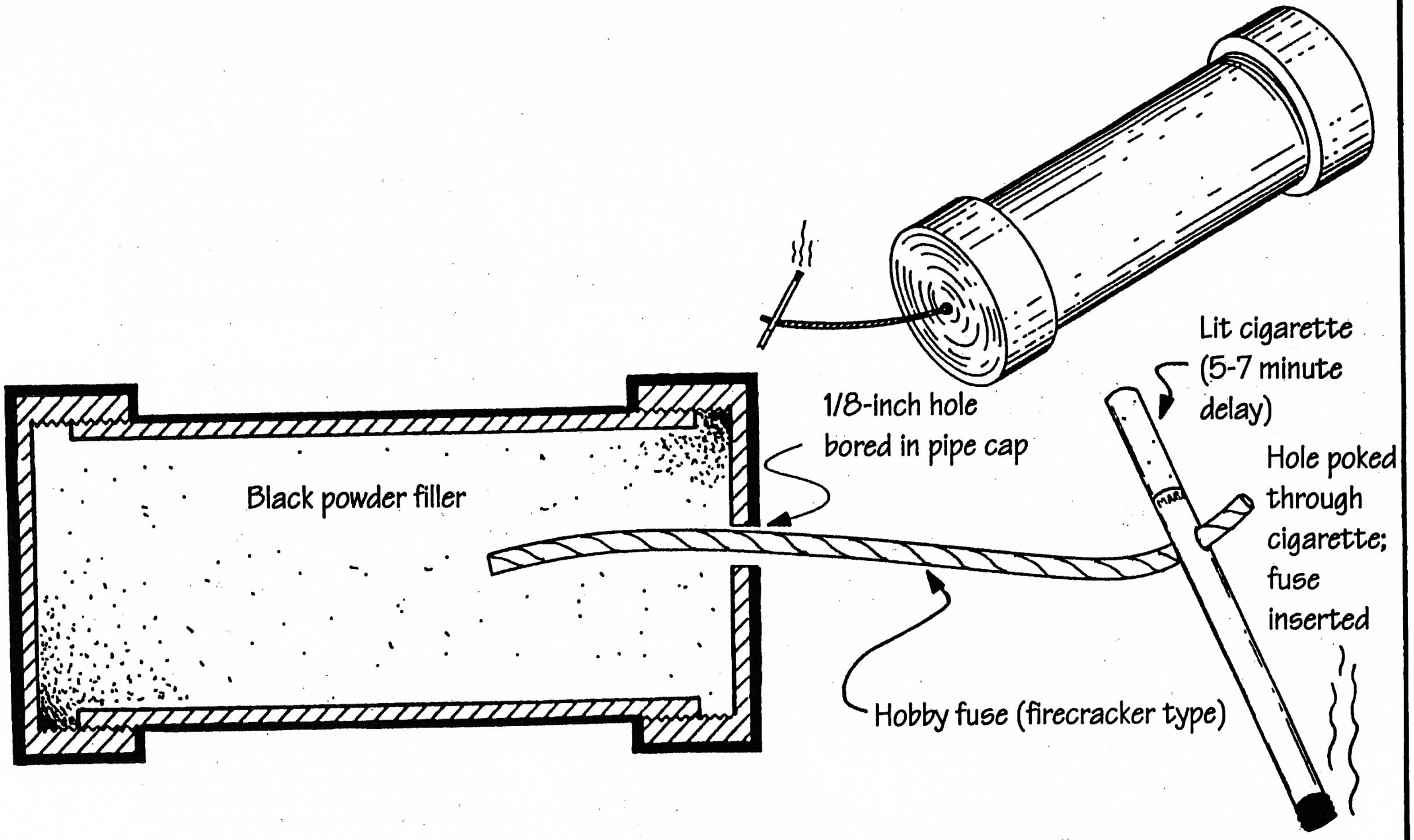

BB's
BB's
BLACK POWDER
EPOXY
Insulated wire leads
Paper funnel
Solid plug of epoxy over opening of can. Could also be liquid steel or aluminum.
Flashbulb
12-oz. soda can
Finished charge ready to be inserted in pipe
CUTAWAY VIEW
A
B
C
PROFESSIONAL PIPE BOMB
#2
1 OF 2 PAGES
NOT TO SCALE


1/8-inch bore hole
Prepared black powder charge with flashbulb detonator and shrapnel
Standard pipe bomb body
Can slid all the way in to bottom of pipe
Wire leads run to battery and initiating switch or action

PROFESSIONAL PIPE BOMB
#2
2 OF 2 PAGES
NOT TO SCALE

PIPE BOMB DESIGNS

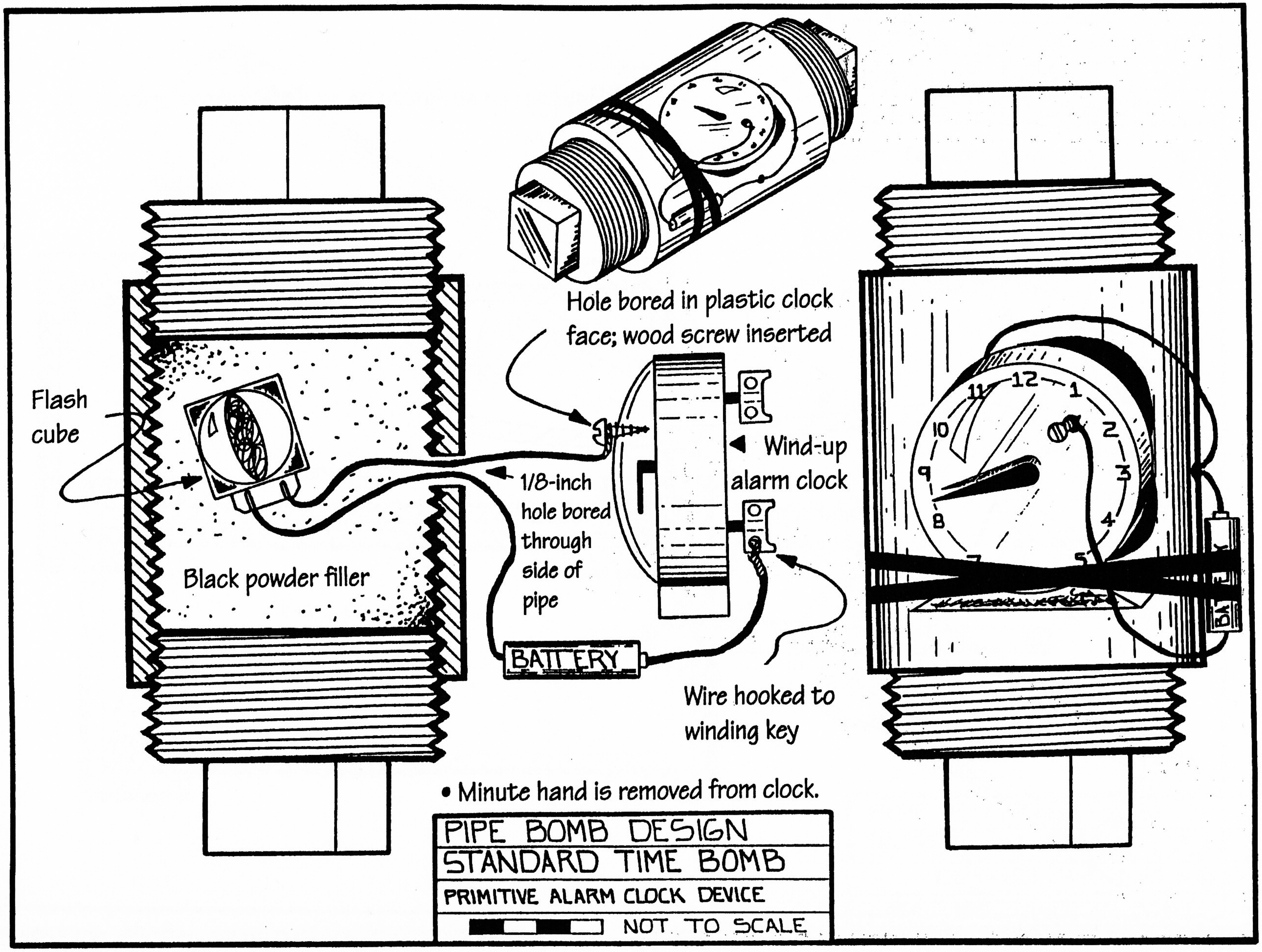

• Cigarette burns down and ignites powder. Bomb explodes
1/4-inch hole bored in pipe cap
Black powder filler
Nonfilter lit cigarette (4-7 minute delay)
PIPE BOMB DESIGN
CIGARETTE IN PIPE CAP DELAY
DESIRED SHRAPNEL ADDED
NOT TO SCALE



Lit cigarette (5-7 minute delay)
Hole poked through cigarette; fuse inserted
1/8-inch hole bored in pipe cap
Black powder filler
Hobby fuse (firecracker type)

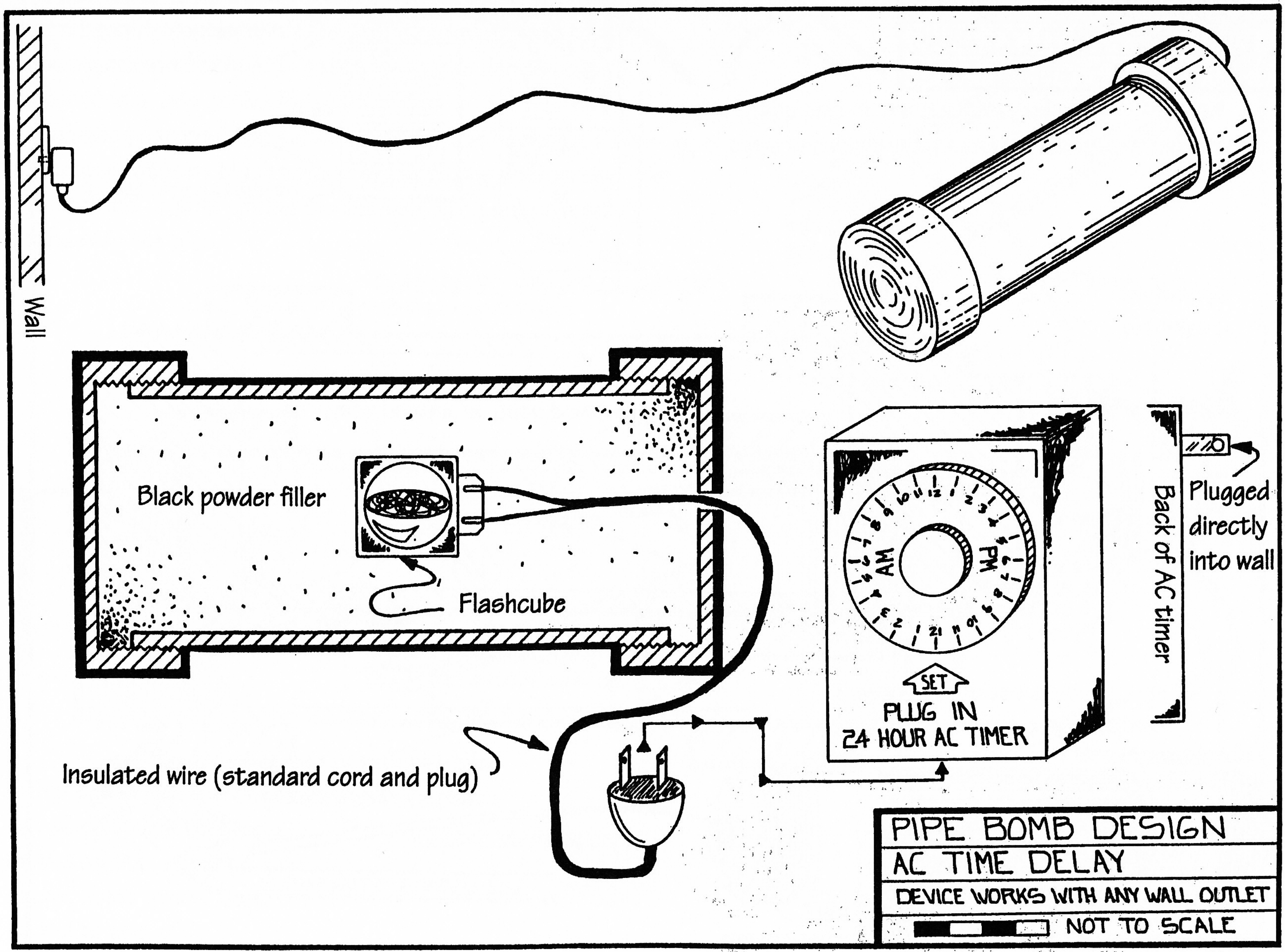
- Simplistic design, but just as deadly as all the rest.

PIPE BOMB DESIGN
PRIMITIVE DEVICE
SCHOOLBOY BOMB. EVERYBODY'S FIRST.
NOT TO SCALE

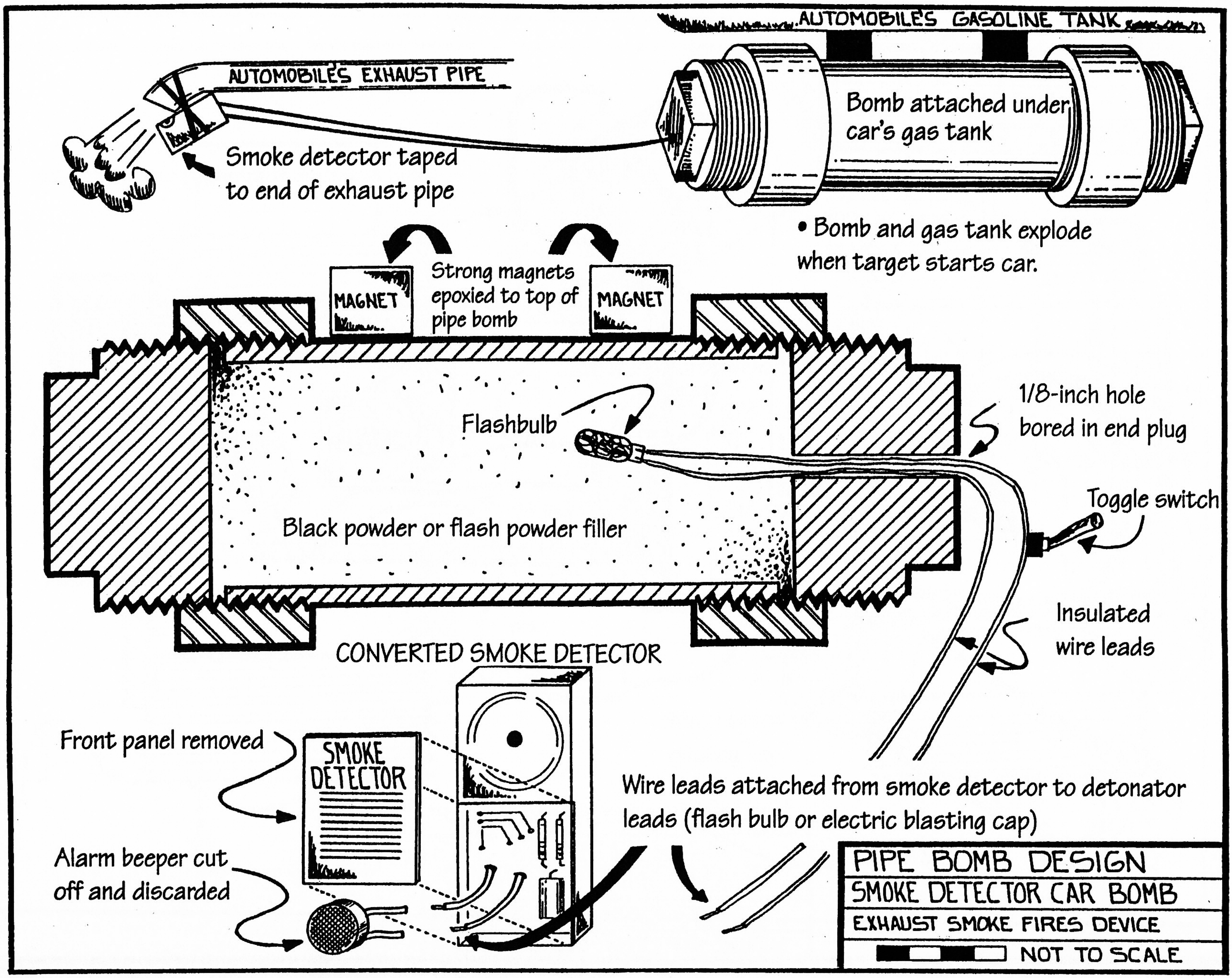

Flash cube
Black powder filler
Hole bored in plastic clock face; wood screw inserted
Wind-up alarm clock
1/8-inch hole bored through side of pipe
BATTERY
Wire hooked to winding key
12
1
2
3
4
5
7
8
9
10
11
BAT

• Minute hand is removed from clock.

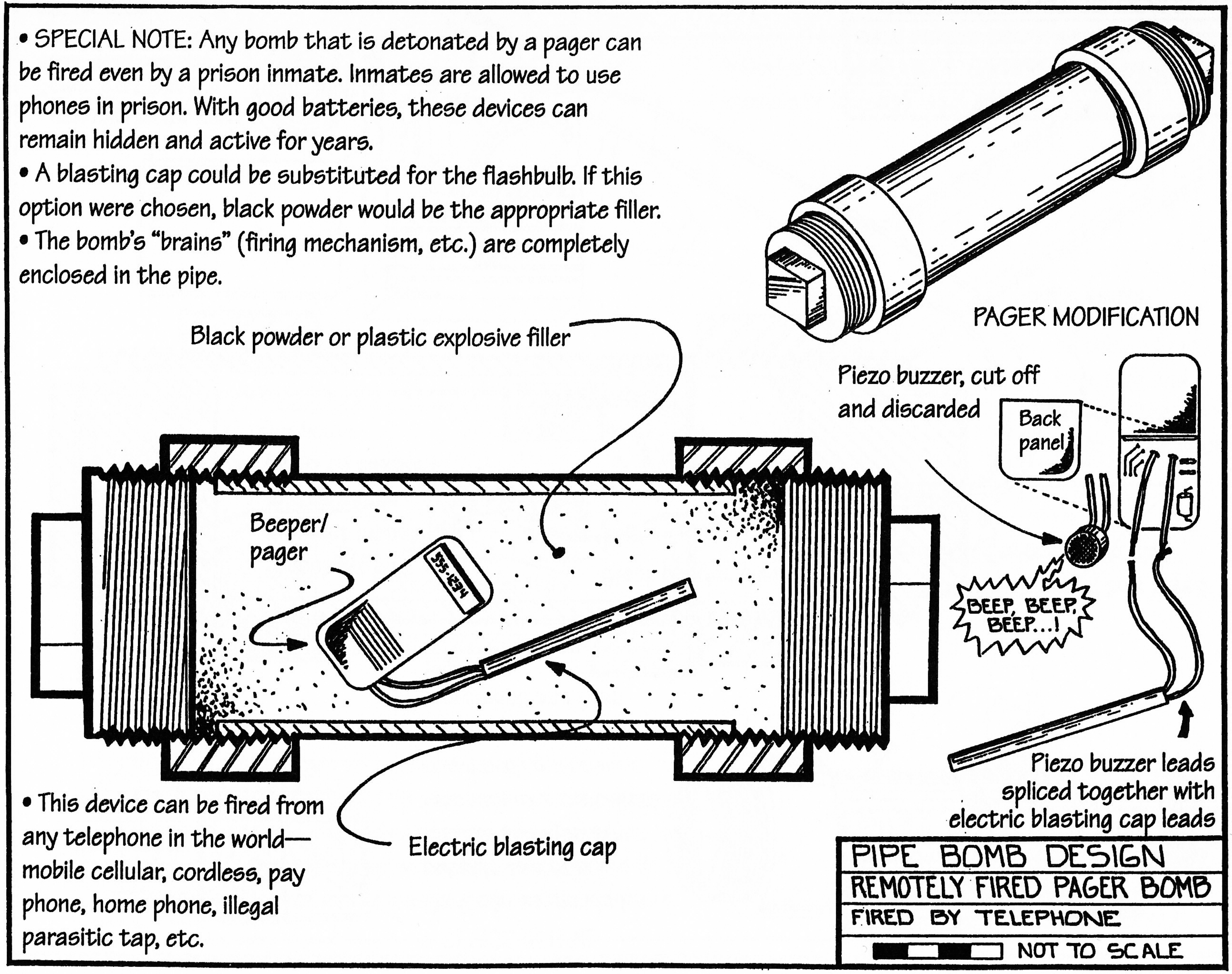
PIPE BOMB DESIGN
STANDARD TIME BOMB
PRIMITIVE ALARM CLOCK DEVICE
NOT TO SCALE


Wall
Black powder filler
Flashcube
Insulated wire (standard cord and plug)
SET
PLUG IN
24 HOUR AC TIMER
AM
PM
Back of AC timer
Plugged directly into wall
PIPE BOMB DESIGN
AC TIME DELAY
DEVICE WORKS WITH ANY WALL OUTLET
NOT TO SCALE

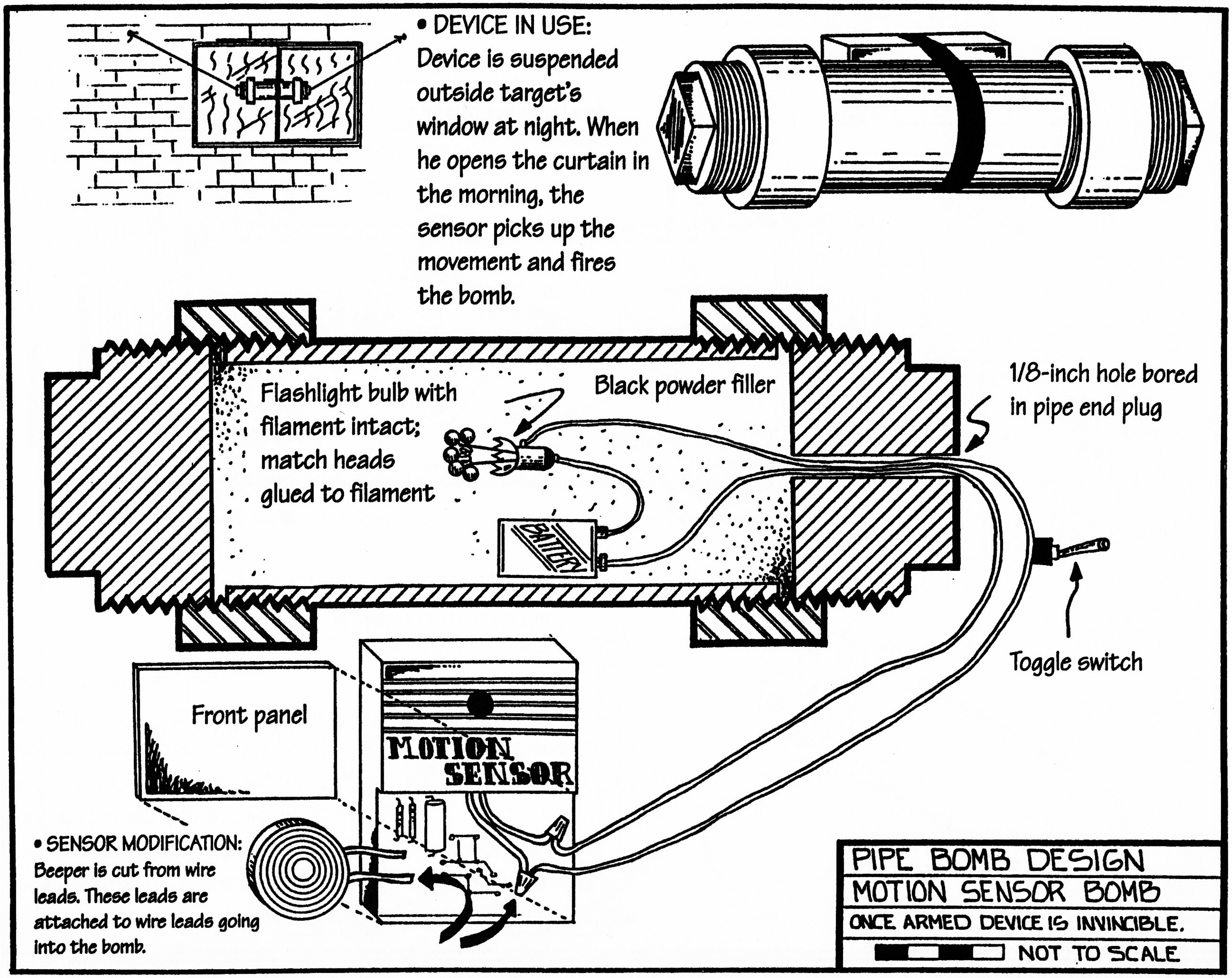
FOR ACADEMIC STUDY ONLY


AUTOMOBILE'S GASOLINE TANK
Bomb attached under car's gas tank
• Bomb and gas tank explode when target starts car.
AUTOMOBILE'S EXHAUST PIPE
Smoke detector taped to end of exhaust pipe
MAGNET
Strong magnets epoxied to top of pipe bomb
MAGNET
1/8-inch hole bored in end plug
Flashbulb
Toggle switch
Black powder or flash powder filler
Insulated wire leads
CONVERTED SMOKE DETECTOR
Front panel removed
SMOKE DETECTOR
Alarm beeper cut off and discarded
Wire leads attached from smoke detector to detonator leads (flash bulb or electric blasting cap)
PIPE BOMB DESIGN
SMOKE DETECTOR CAR BOMB
EXHAUST SMOKE FIRES DEVICE
NOT TO SCALE

- SPECIAL NOTE: Any bomb that is detonated by a pager can be fired even by a prison inmate. Inmates are allowed to use phones in prison. With good batteries, these devices can remain hidden and active for years.
- A blasting cap could be substituted for the flashbulb. If this option were chosen, black powder would be the appropriate filler.
- The bomb's "brains" (firing mechanism, etc.) are completely enclosed in the pipe.


PAGER MODIFICATION
Black powder or plastic explosive filler
Piezo buzzer, cut off and discarded
Back panel
Beeper/ pager
555-1234
BEEP, BEEP, BEEP...!
Piezo buzzer leads spliced together with electric blasting cap leads
Electric blasting cap
PIPE BOMB DESIGN
REMOTELY FIRED PAGER BOMB
FIRED BY TELEPHONE
NOT TO SCALE

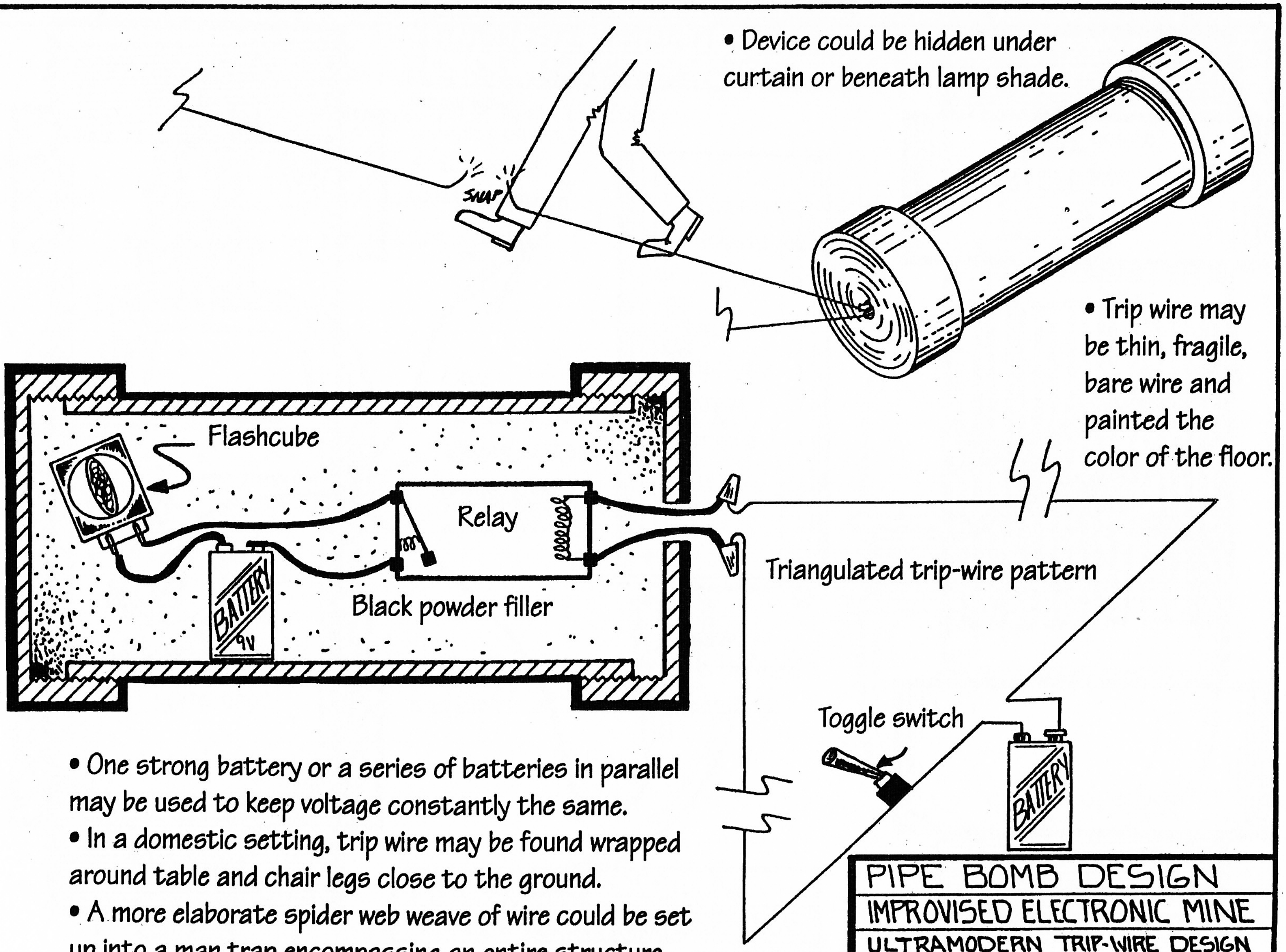
- This device can be fired from any telephone in the world—mobile cellular, cordless, pay phone, home phone, illegal parasitic tap, etc.


Flashlight bulb with filament intact; match heads glued to filament
Black powder filler
1/8-inch hole bored in pipe end plug
Toggle switch
BATTERY
MOTION SENSOR
Front panel

• DEVICE IN USE: Device is suspended outside target's window at night. When he opens the curtain in the morning, the sensor picks up the movement and fires the bomb.

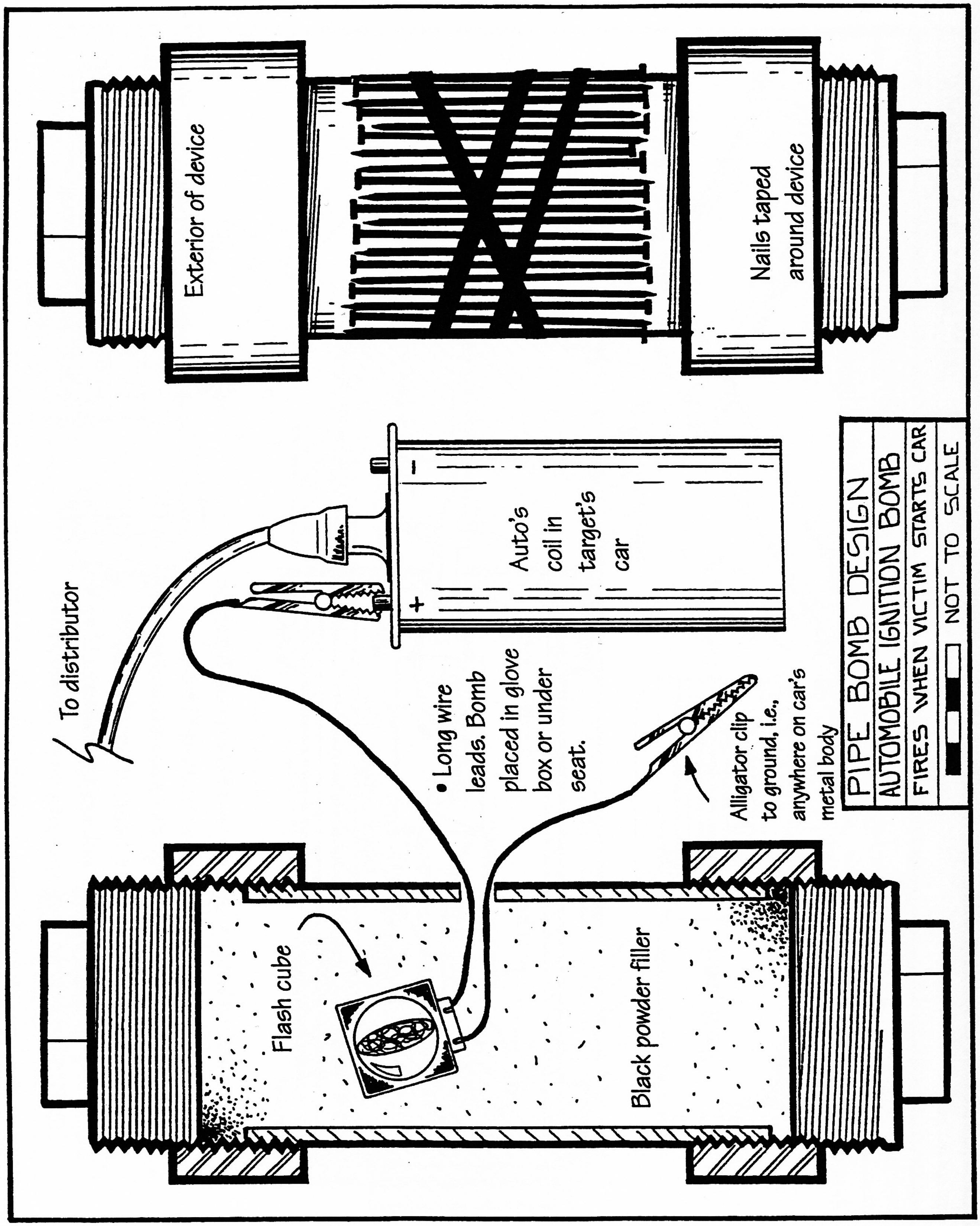
• SENSOR MODIFICATION: Beeper is cut from wire leads. These leads are attached to wire leads going into the bomb.

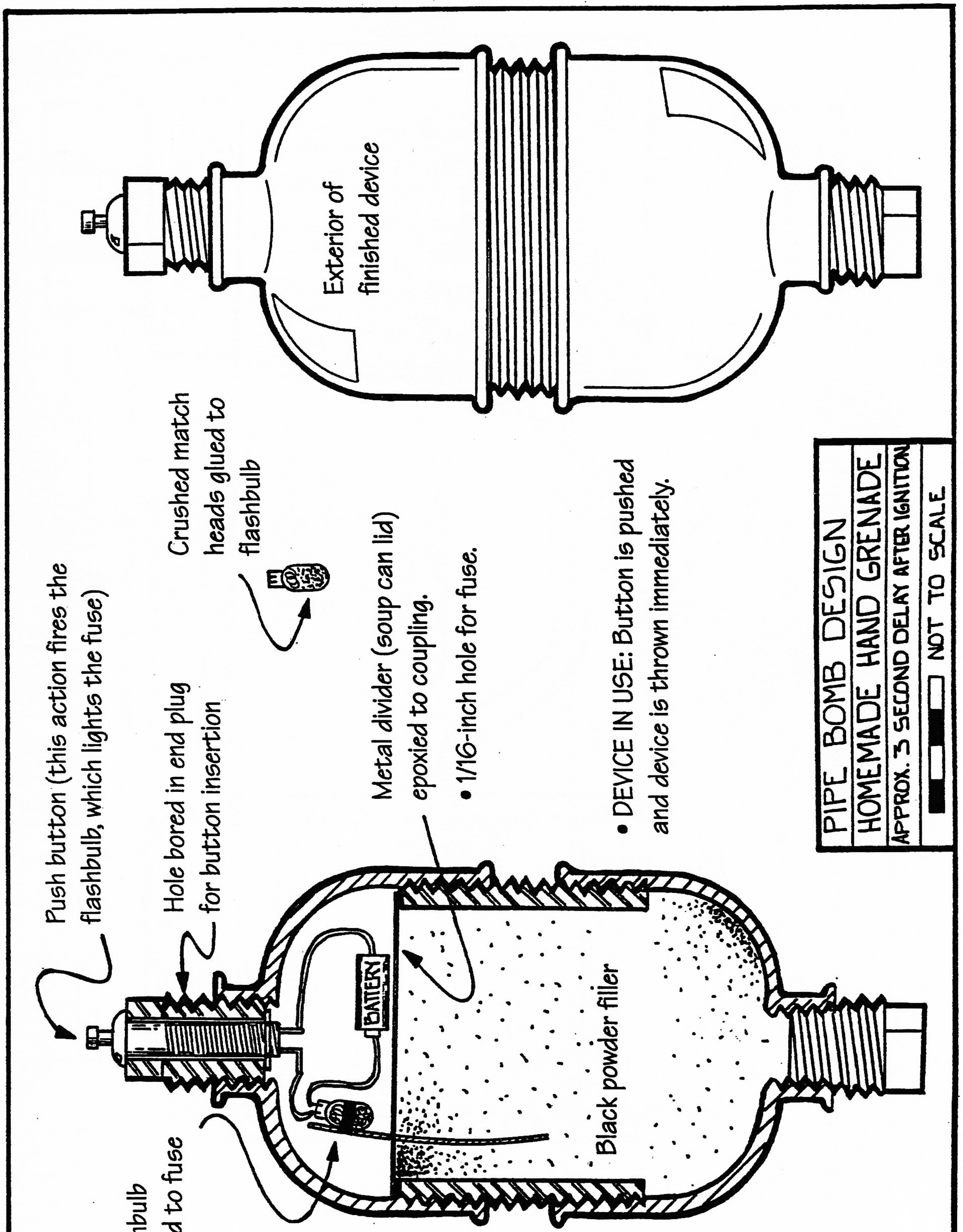
PIPE BOMB DESIGN
MOTION SENSOR BOMB
ONCE ARMED DEVICE IS INVINCIBLE.
NOT TO SCALE


SNAP
Flashcube
Relay
Black powder filler
BATTERY
9V
Triangulated trip-wire pattern
Toggle switch
BATTERY

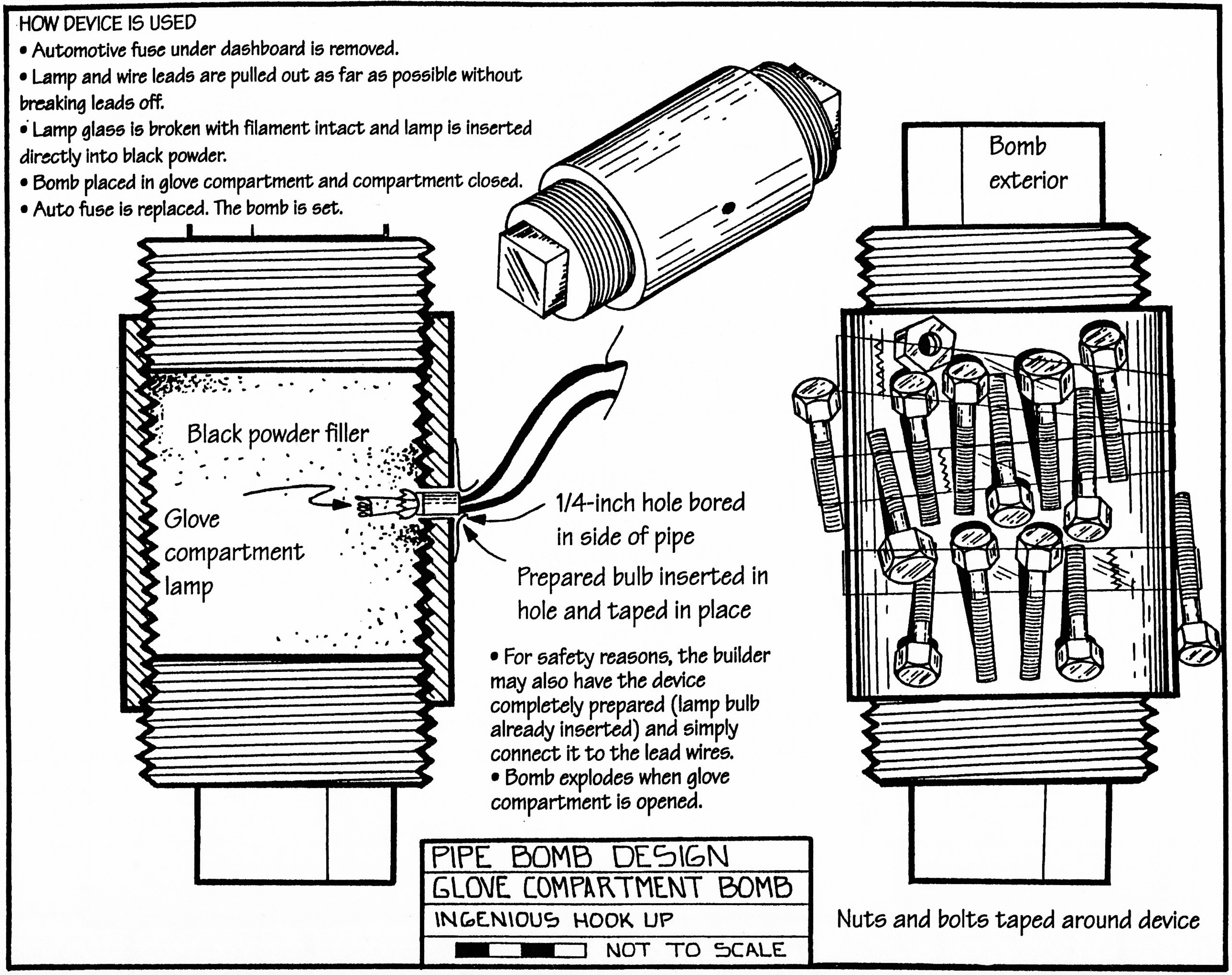
- Device could be hidden under curtain or beneath lamp shade.
- Trip wire may be thin, fragile, bare wire and painted the color of the floor.
- One strong battery or a series of batteries in parallel may be used to keep voltage constantly the same.
- In a domestic setting, trip wire may be found wrapped around table and chair legs close to the ground.
- A more elaborate spider web weave of wire could be set up into a man trap encompassing an entire structure.

PIPE BOMB DESIGN
IMPROVISED ELECTRONIC MINE
ULTRAMODERN TRIP-WIRE DESIGN
NOT TO SCALE


Exterior of device
Nails taped around device
To distributor
Auto's coil in target's car
+
−
• Long wire leads. Bomb placed in glove box or under seat.
Alligator clip to ground, i.e., anywhere on car's metal body
Flash cube
Black powder filler
PIPE BOMB DESIGN
AUTOMOBILE IGNITION BOMB
FIRES WHEN VICTIM STARTS CAR
NOT TO SCALE



PIPE BOMB DESIGN
HOMEMADE HAND GRENADE
NOT TO SCALE

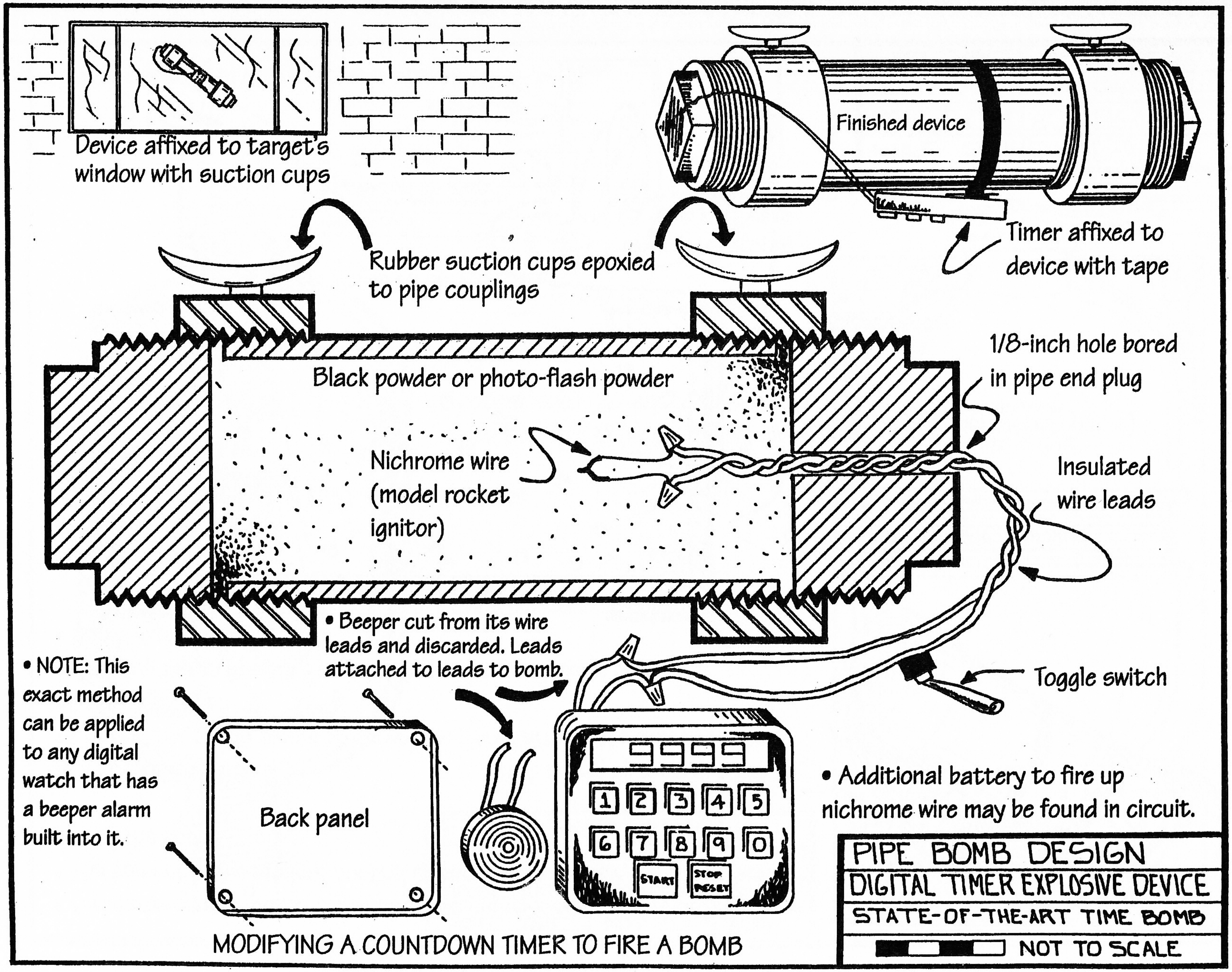


HOW DEVICE IS USED
- Automotive fuse under dashboard is removed.
- Lamp and wire leads are pulled out as far as possible without breaking leads off.
- Lamp glass is broken with filament intact and lamp is inserted directly into black powder.
- Bomb placed in glove compartment and compartment closed.
- Auto fuse is replaced. The bomb is set.

Black powder filler
Glove compartment lamp
1/4-inch hole bored in side of pipe
Prepared bulb inserted in hole and taped in place
Bomb exterior
Nuts and bolts taped around device

- For safety reasons, the builder may also have the device completely prepared (lamp bulb already inserted) and simply connect it to the lead wires.
- Bomb explodes when glove compartment is opened.

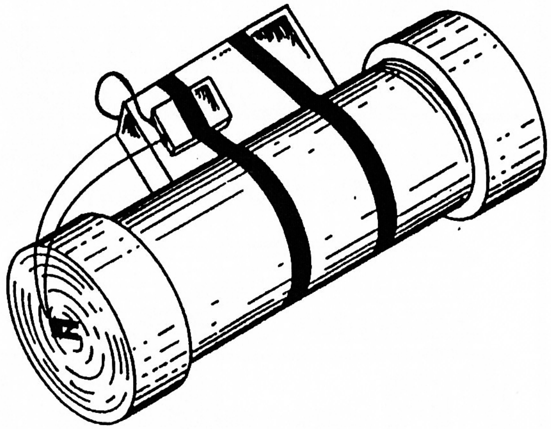
PIPE BOMB DESIGN
GLOVE COMPARTMENT BOMB
INGENIOUS HOOK UP
NOT TO SCALE

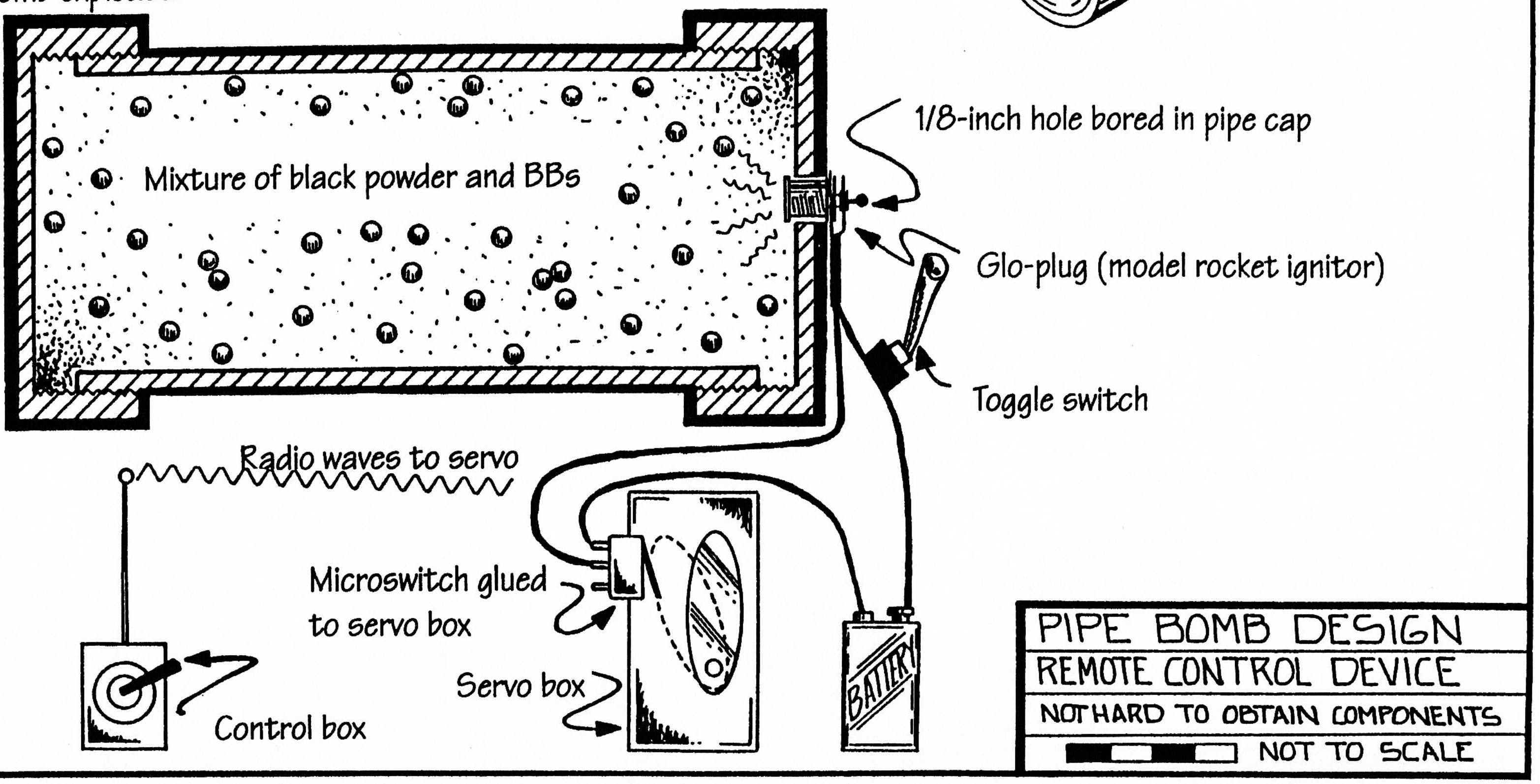

Device affixed to target's window with suction cups
Finished device
Timer affixed to device with tape
Rubber suction cups epoxied to pipe couplings
Black powder or photo-flash powder
1/8-inch hole bored in pipe end plug
Nichrome wire (model rocket ignitor)
Insulated wire leads
• Beeper cut from its wire leads and discarded. Leads attached to leads to bomb.
Toggle switch
• NOTE: This exact method can be applied to any digital watch that has a beeper alarm built into it.
Back panel
9999
1 2 3 4 5
6 7 8 9 0
START
STOP RESET
• Additional battery to fire up nichrome wire may be found in circuit.
MODIFYING A COUNTDOWN TIMER TO FIRE A BOMB
PIPE BOMB DESIGN
DIGITAL TIMER EXPLOSIVE DEVICE
STATE-OF-THE-ART TIME BOMB
NOT TO SCALE

- A remote-control bomb is the ultimate improvised explosive device.
- The bomber has complete control of the situation while remaining well out of the scene.

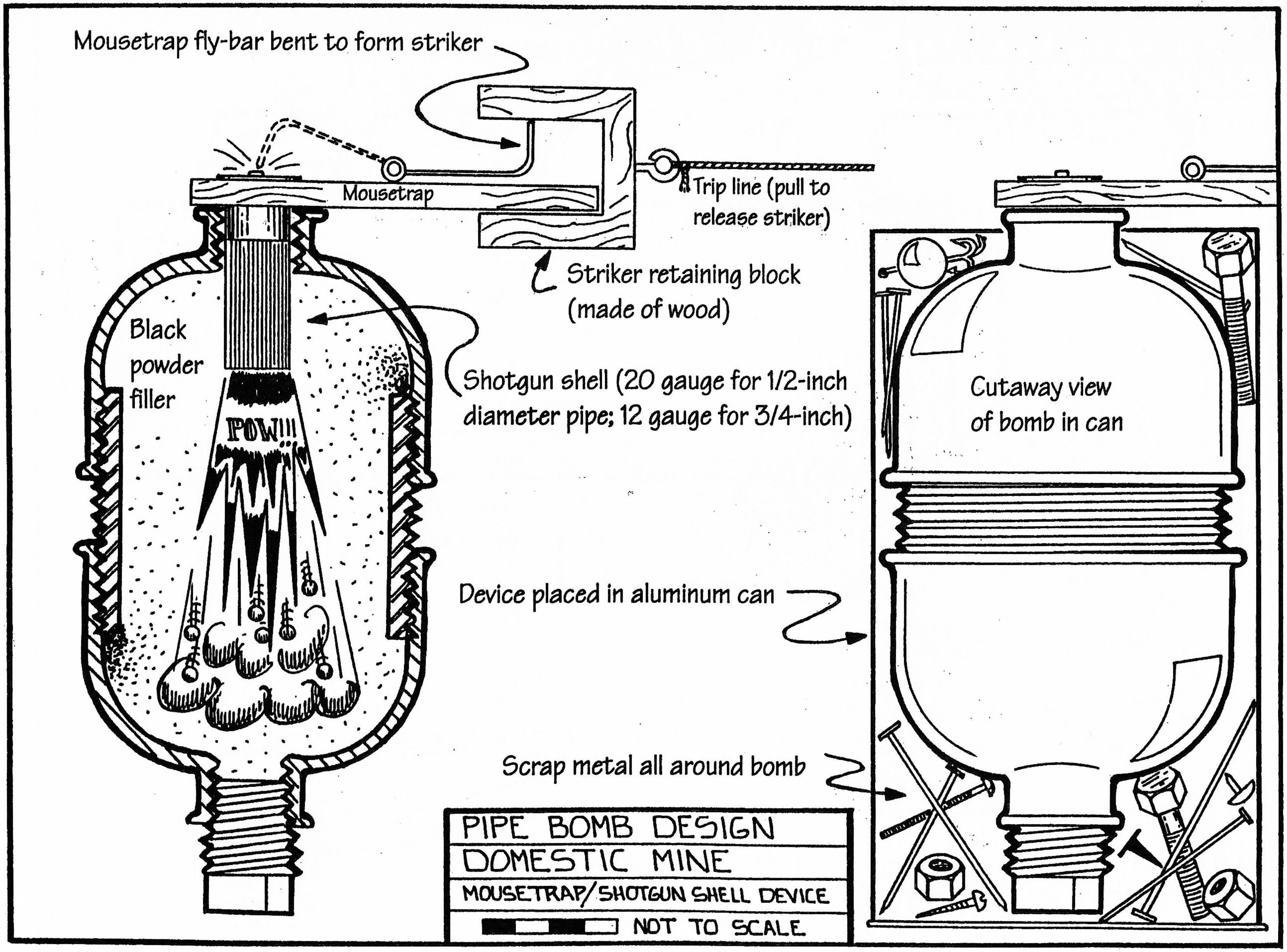
HOW DEVICE IS USED

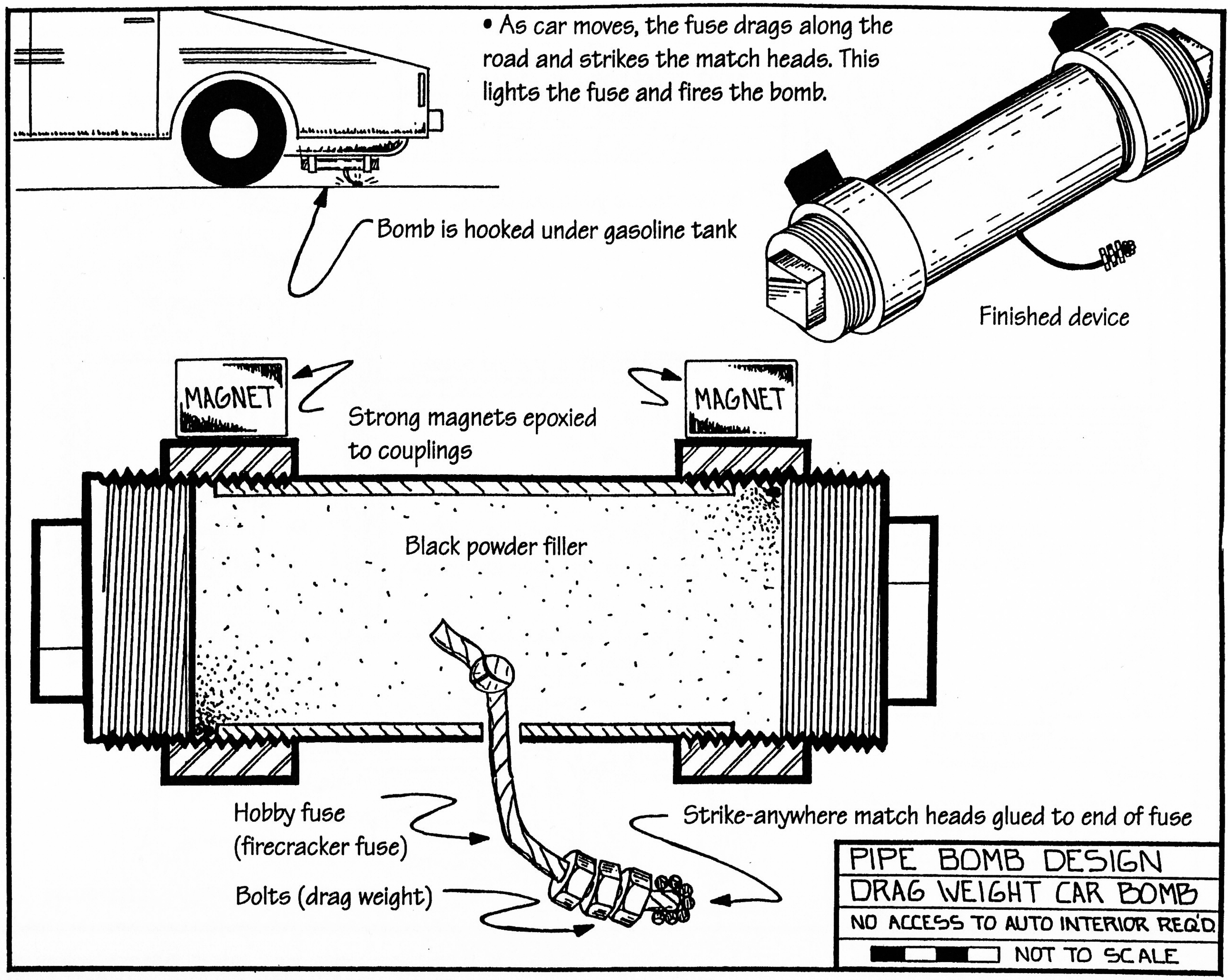
- Control box sends signal to servo box. Servo arm pivots and activates microswitch lever.
- Glo-plug flares up and lights black powder confined in pipe.
- Bomb explodes.

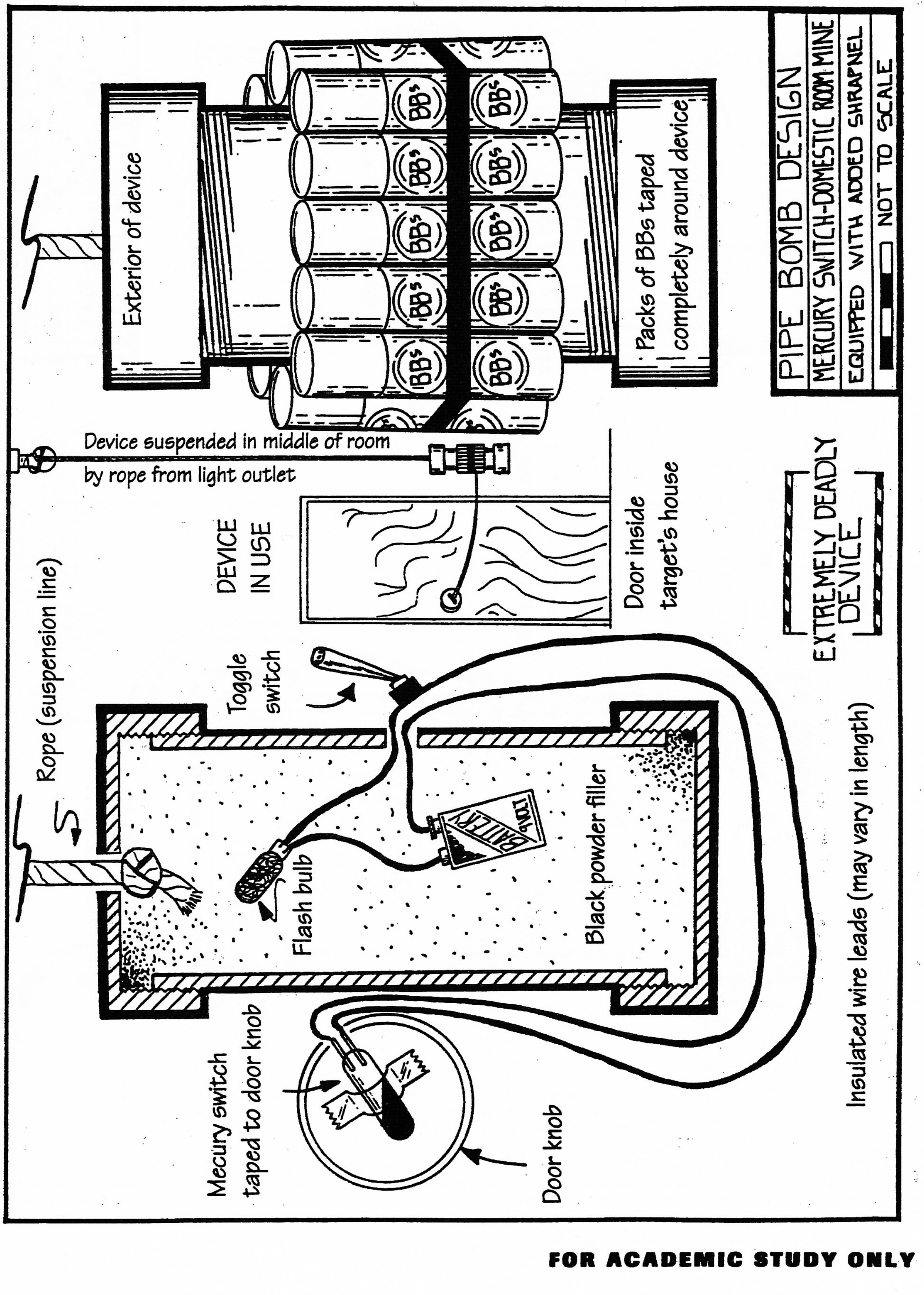


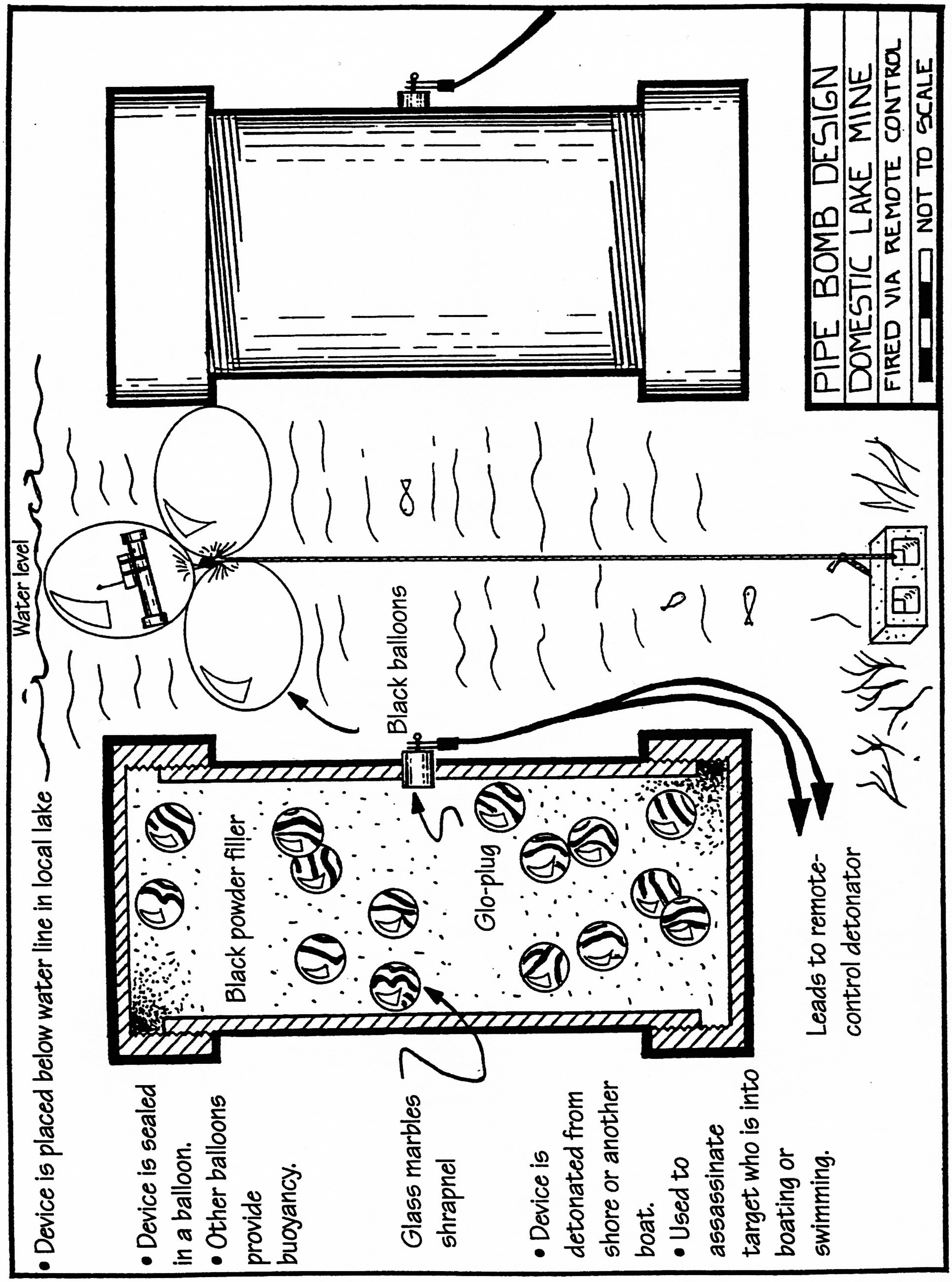

Mixture of black powder and BBs
1/8-inch hole bored in pipe cap
Glo-plug (model rocket ignitor)
Toggle switch
Radio waves to servo
Microswitch glued to servo box
Servo box
Control box
BATTERY

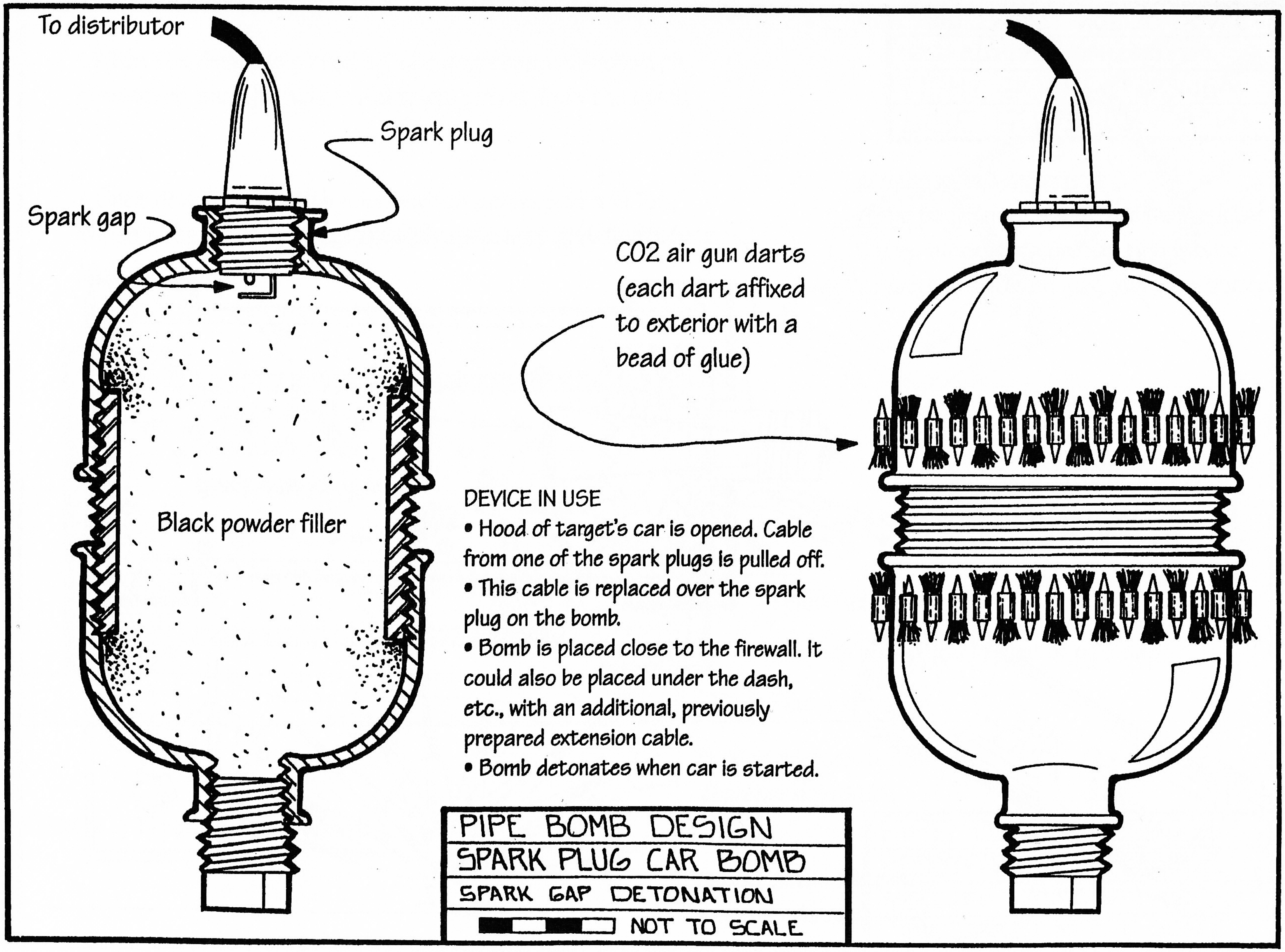
PIPE BOMB DESIGN
REMOTE CONTROL DEVICE
NOT HARD TO OBTAIN COMPONENTS
NOT TO SCALE


Mousetrap fly-bar bent to form striker
Mousetrap
Trip line (pull to release striker)
Striker retaining block (made of wood)
Black powder filler
POW!!!
Shotgun shell (20 gauge for 1/2-inch diameter pipe; 12 gauge for 3/4-inch)
Cutaway view of bomb in can
Device placed in aluminum can
Scrap metal all around bomb
PIPE BOMB DESIGN
DOMESTIC MINE
MOUSETRAP/SHOTGUN SHELL DEVICE
NOT TO SCALE


• As car moves, the fuse drags along the road and strikes the match heads. This lights the fuse and fires the bomb.
Bomb is hooked under gasoline tank
Finished device
MAGNET
MAGNET
Strong magnets epoxied to couplings
Black powder filler
Hobby fuse (firecracker fuse)
Bolts (drag weight)
Strike-anywhere match heads glued to end of fuse
PIPE BOMB DESIGN
DRAG WEIGHT CAR BOMB
NO ACCESS TO AUTO INTERIOR REQ'D.
NOT TO SCALE


PIPE BOMB DESIGN
MERCURY SWITCH-DOMESTIC ROOM MINE
EQUIPPED WITH ADDED SHRAPNEL
NOT TO SCALE
Exterior of device
BBs
Packs of BBs taped completely around device
Device suspended in middle of room by rope from light outlet
DEVICE IN USE
Door inside target's house
EXTREMELY DEADLY DEVICE
Rope (suspension line)
Toggle switch
Flash bulb
BATTERY
Black powder filler
Mecury switch taped to door knob
Door knob
Insulated wire leads (may vary in length)


PIPE BOMB DESIGN
DOMESTIC LAKE MINE
FIRED VIA REMOTE CONTROL
NOT TO SCALE
• Device is placed below water line in local lake
Water level
• Device is sealed in a balloon.
• Other balloons provide buoyancy.
Black balloons
Black powder filler
Glo-plug
Glass marbles shrapnel
Leads to remote-control detonator
• Device is detonated from shore or another boat.
• Used to assassinate target who is into boating or swimming.

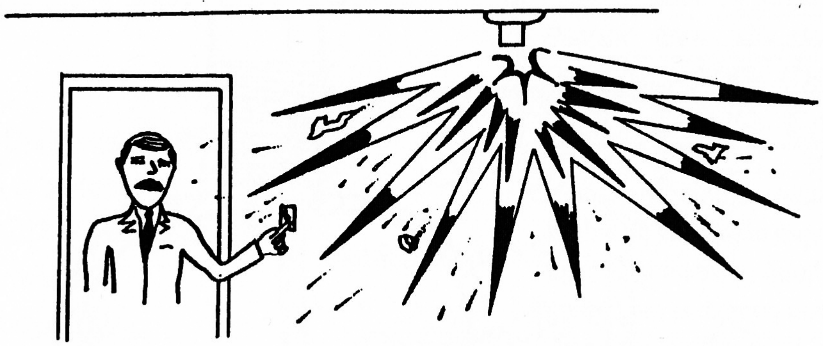


To distributor
Spark plug
Spark gap
Black powder filler
CO2 air gun darts (each dart affixed to exterior with a bead of glue)

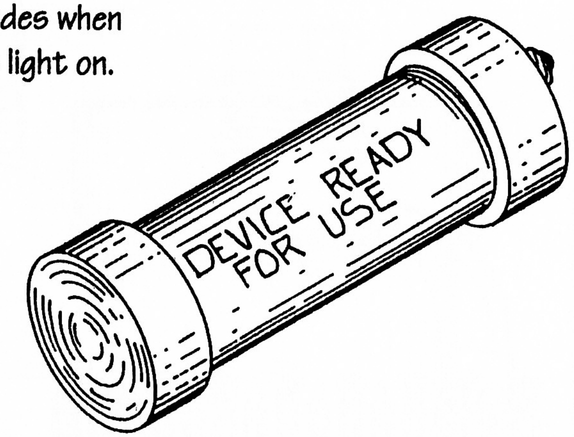
DEVICE IN USE

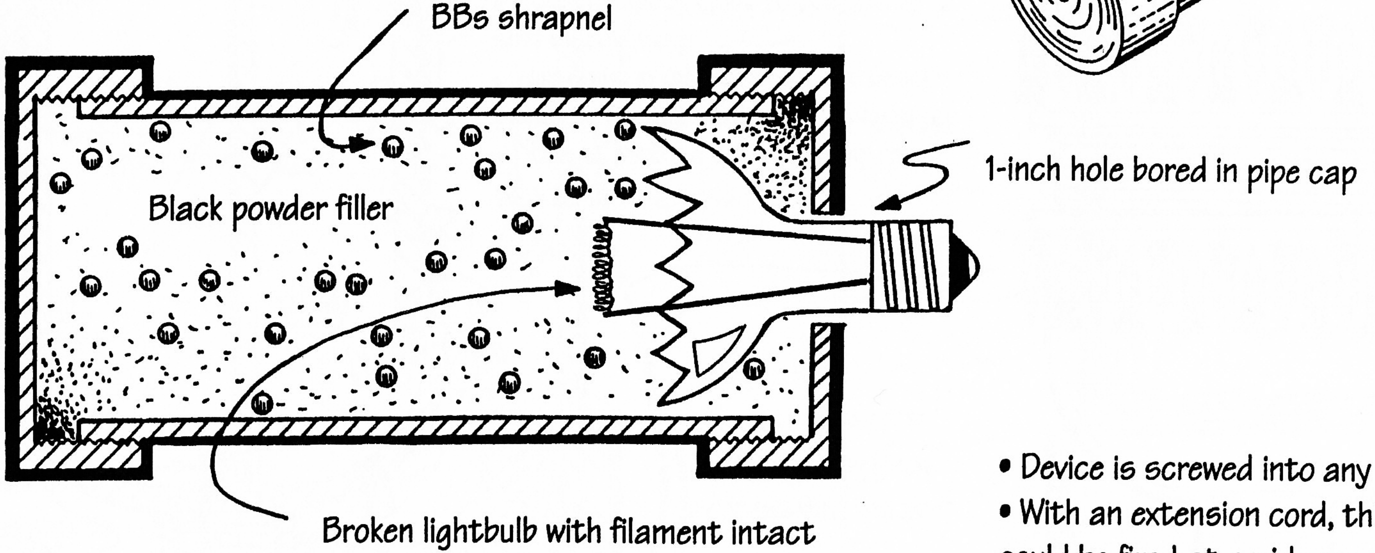
- Hood of target's car is opened. Cable from one of the spark plugs is pulled off.
- This cable is replaced over the spark plug on the bomb.
- Bomb is placed close to the firewall. It could also be placed under the dash, etc., with an additional, previously prepared extension cable.
- Bomb detonates when car is started.

PIPE BOMB DESIGN
SPARK PLUG CAR BOMB
SPARK GAP DETONATION
NOT TO SCALE



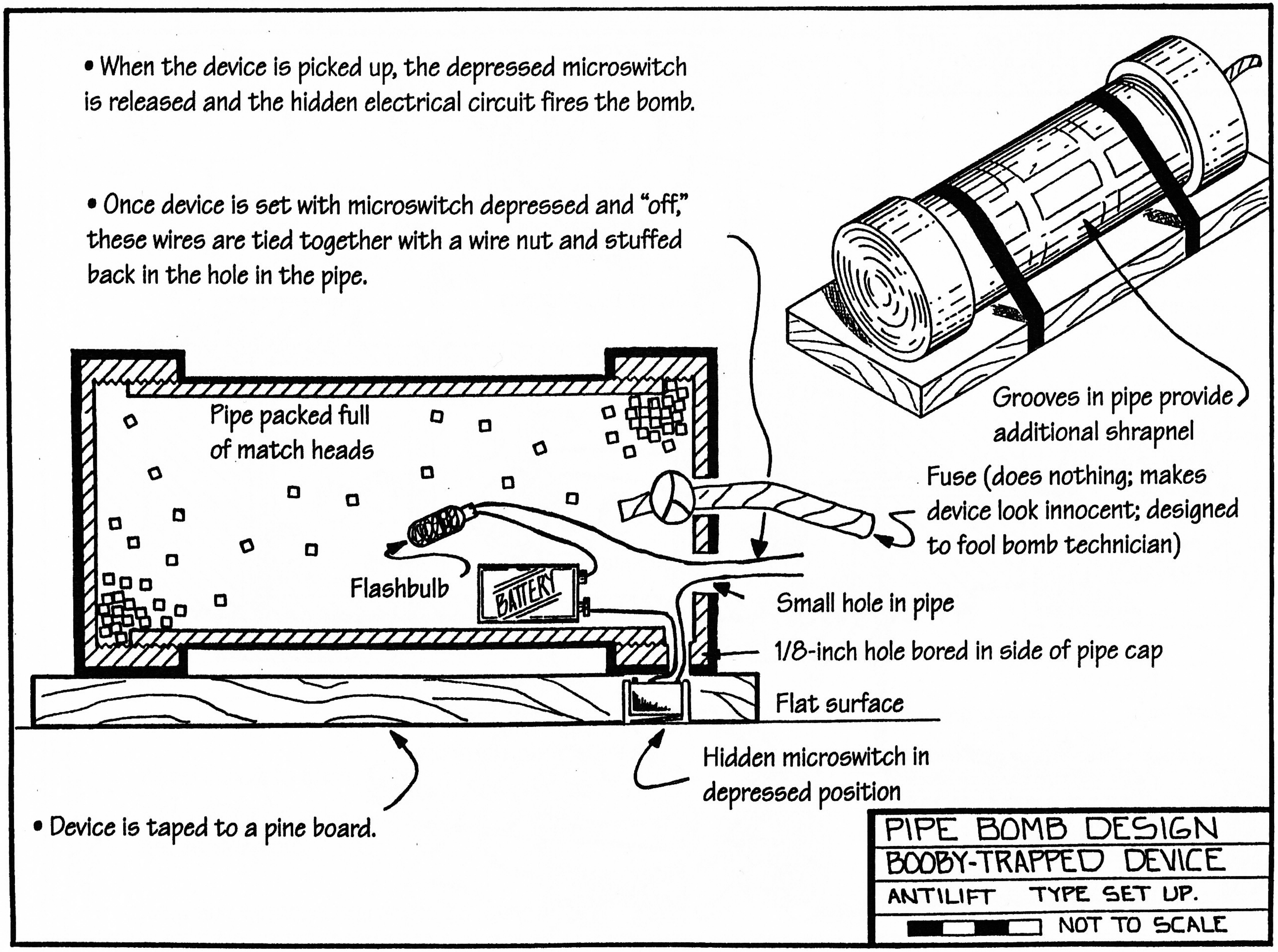
- Bomb explodes when target turns light on.


DEVICE READY
FOR USE


BBs shrapnel
Black powder filler
1-inch hole bored in pipe cap
Broken lightbulb with filament intact

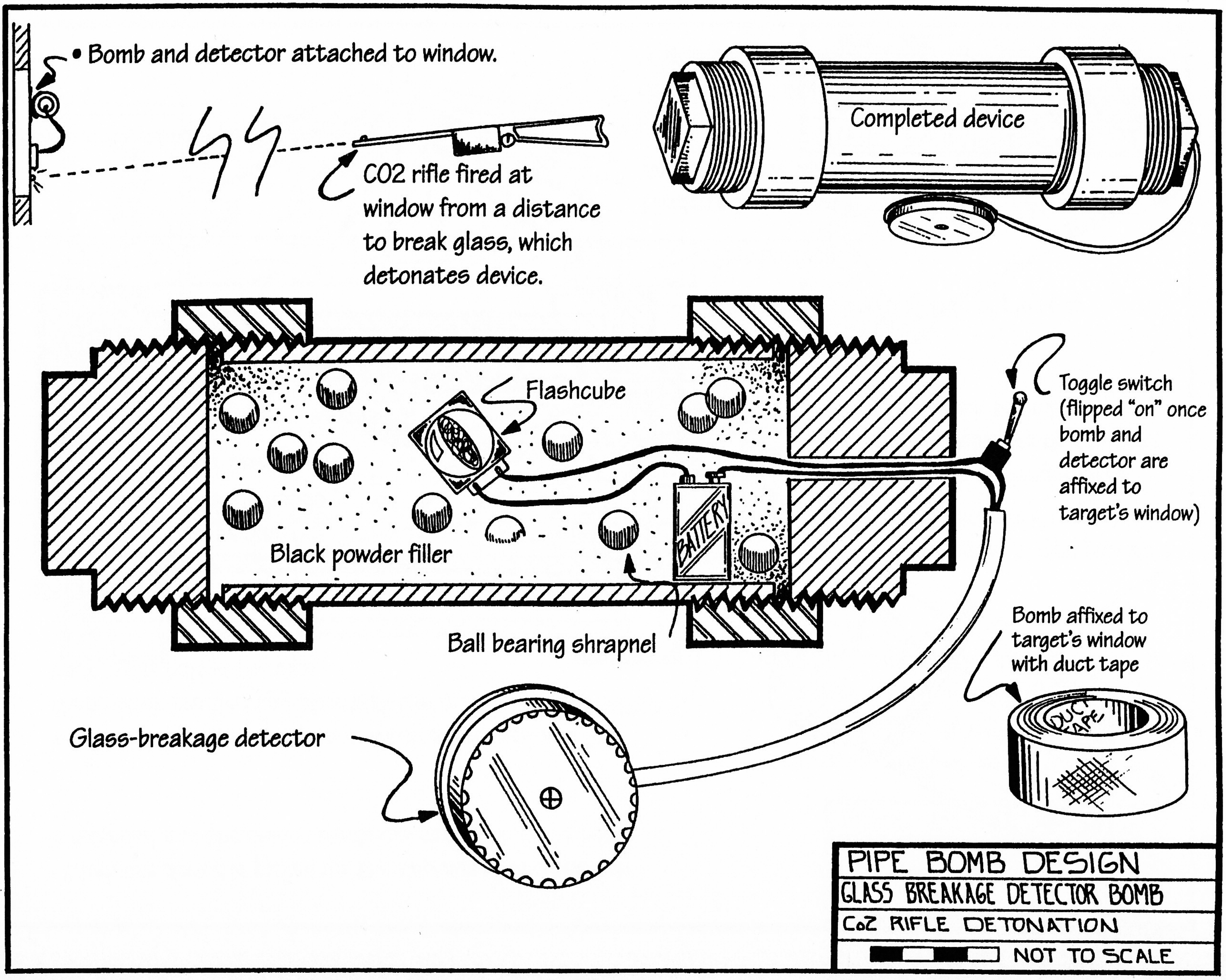
- Device is screwed into any light socket.
- With an extension cord, this device could be fired at a wide range of targets in almost any situation.

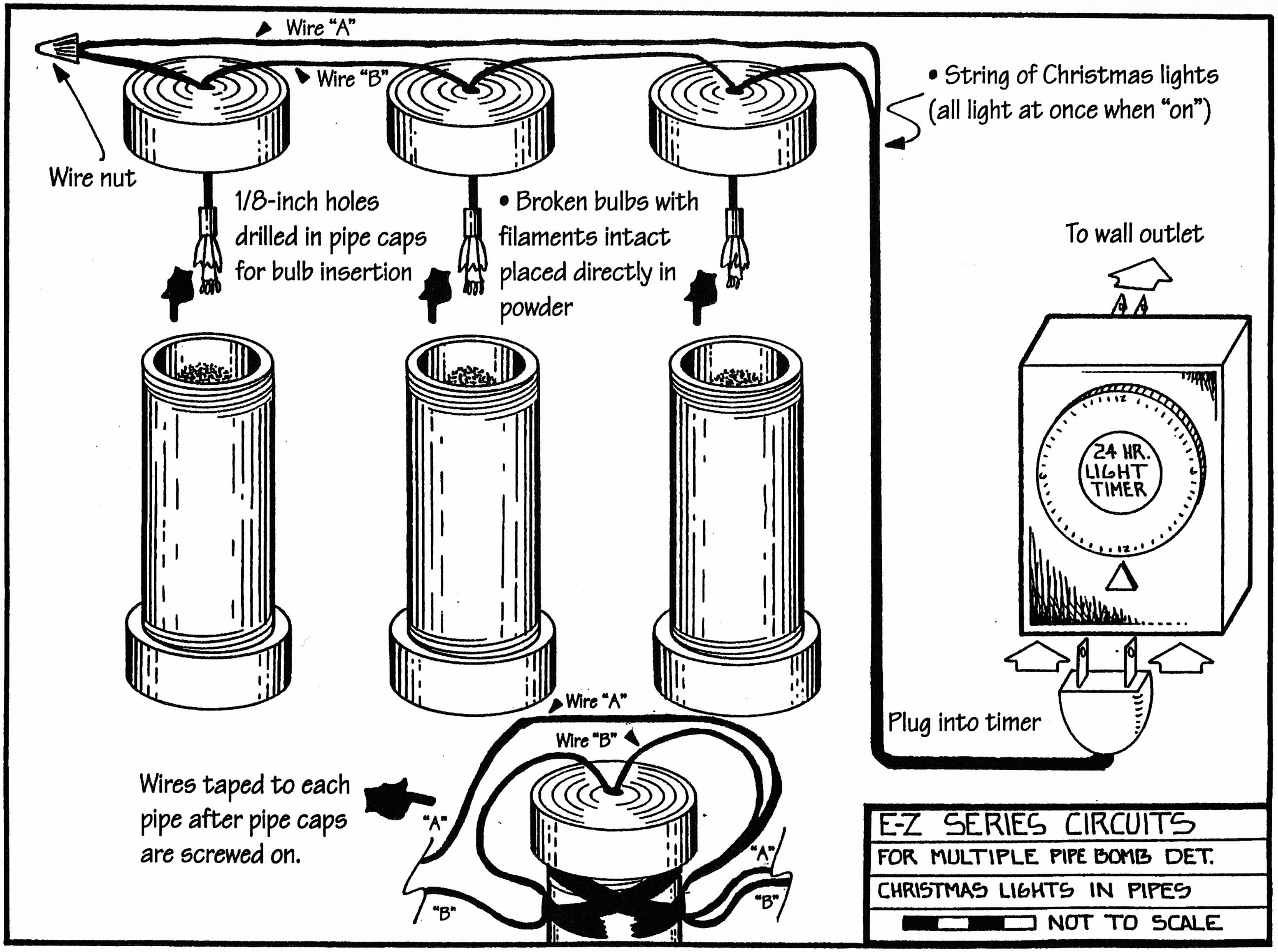
PIPE BOMB DESIGN
LIGHT SOCKET BOMB
USES STANDARD LIGHT BULB
NOT TO SCALE

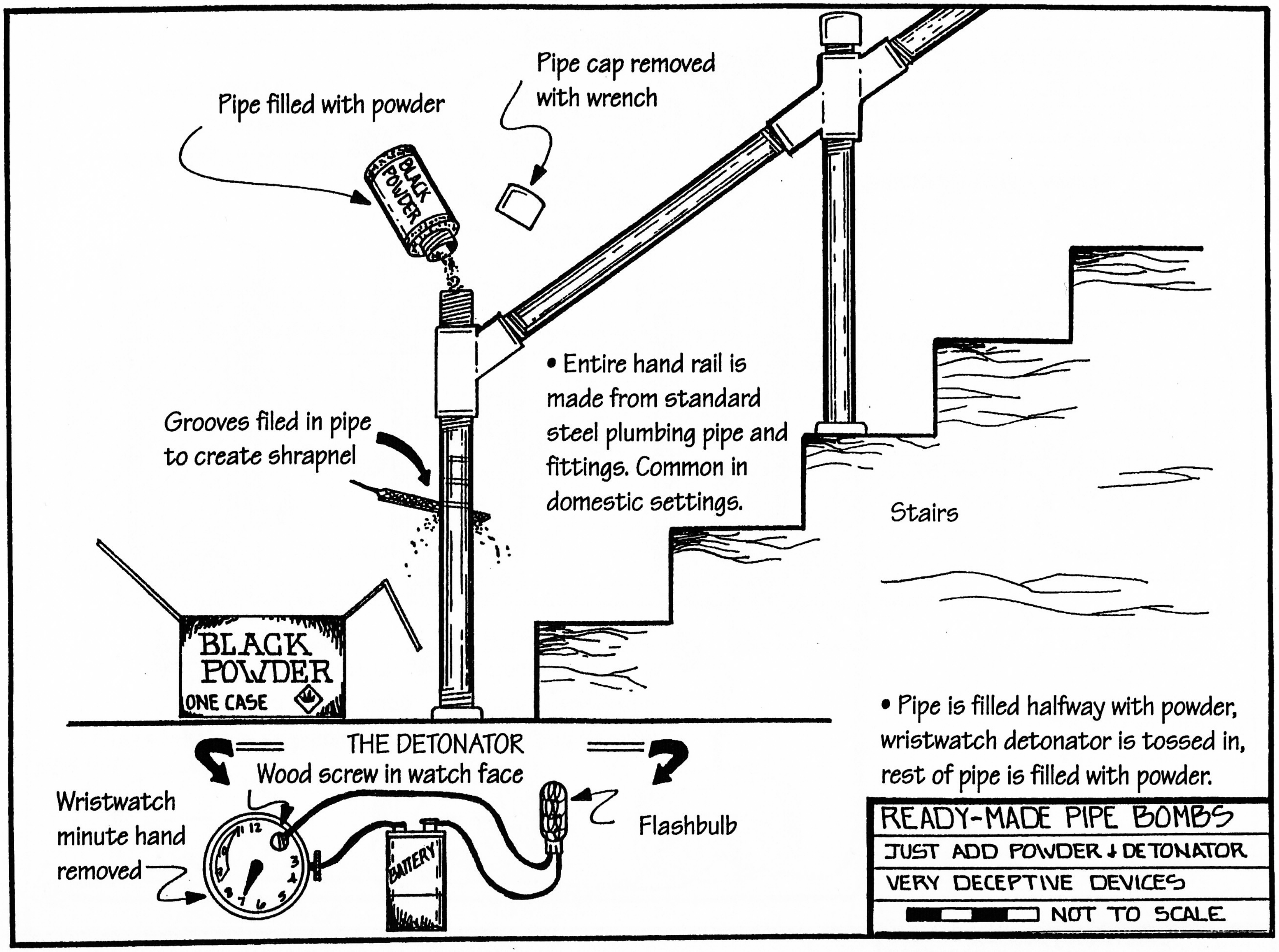


- When the device is picked up, the depressed microswitch is released and the hidden electrical circuit fires the bomb.
- Once device is set with microswitch depressed and "off," these wires are tied together with a wire nut and stuffed back in the hole in the pipe.
- Device is taped to a pine board.

Grooves in pipe provide additional shrapnel
Fuse (does nothing; makes device look innocent; designed to fool bomb technician)
Pipe packed full of match heads
Flashbulb
BATTERY
Small hole in pipe
1/8-inch hole bored in side of pipe cap
Flat surface
Hidden microswitch in depressed position
PIPE BOMB DESIGN
BOOBY-TRAPPED DEVICE
ANTILIFT TYPE SET UP.
NOT TO SCALE


• Bomb and detector attached to window.
CO2 rifle fired at window from a distance to break glass, which detonates device.
Completed device
Flashcube
BATTERY
Black powder filler
Ball bearing shrapnel
Toggle switch (flipped "on" once bomb and detector are affixed to target's window)
Bomb affixed to target's window with duct tape
DUCT TAPE
Glass-breakage detector
PIPE BOMB DESIGN
GLASS BREAKAGE DETECTOR BOMB
CO2 RIFLE DETONATION
NOT TO SCALE


Wire "A"
Wire "B"
Wire nut
1/8-inch holes drilled in pipe caps for bulb insertion
• Broken bulbs with filaments intact placed directly in powder
• String of Christmas lights (all light at once when "on")
To wall outlet
24 HR. LIGHT TIMER
Plug into timer
Wire "A"
Wire "B"
Wires taped to each pipe after pipe caps are screwed on.
"A"
"B"
"A"
"B"
E-Z SERIES CIRCUITS
FOR MULTIPLE PIPE BOMB DET.
CHRISTMAS LIGHTS IN PIPES
NOT TO SCALE

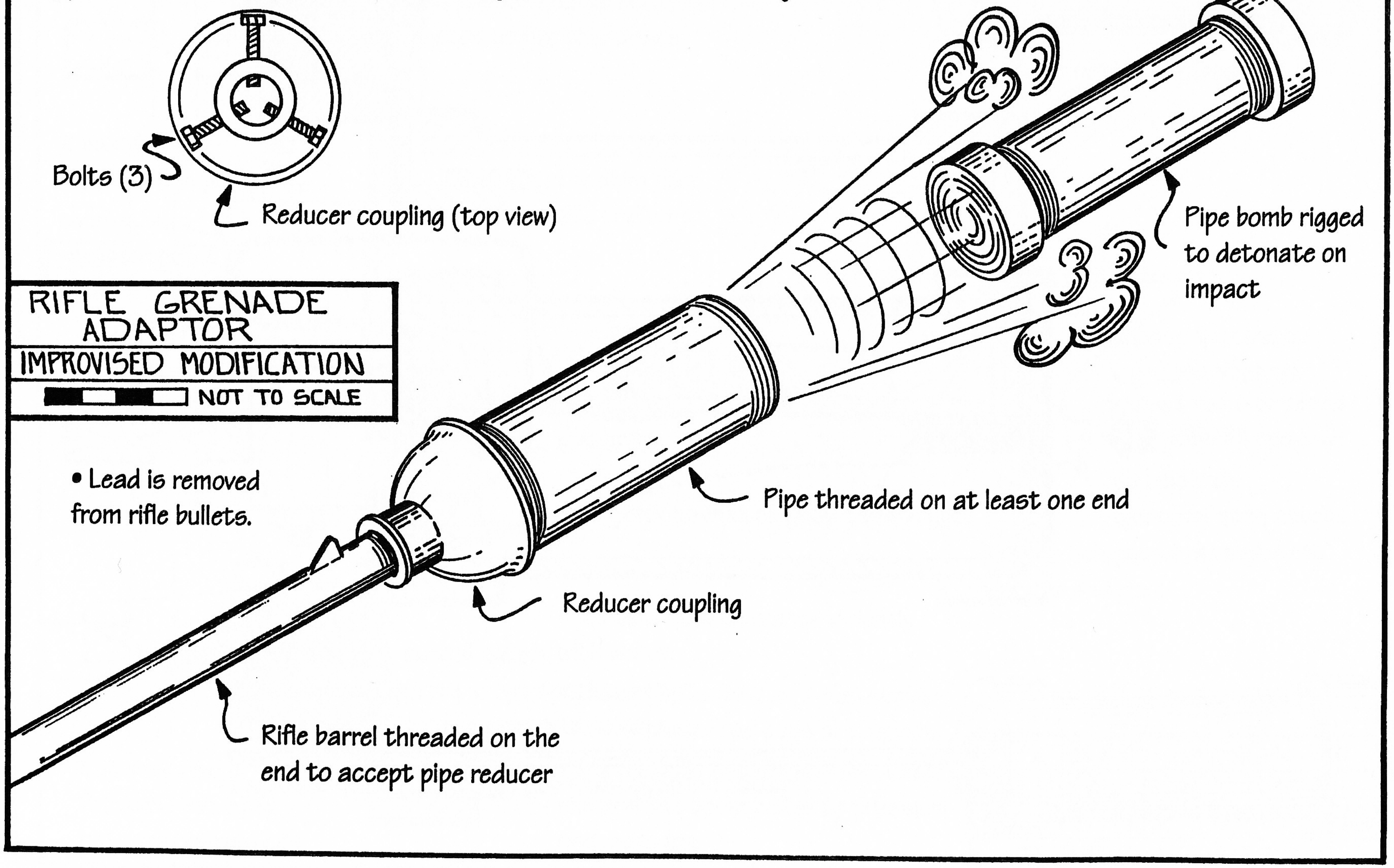

Pipe filled with powder
BLACK POWDER
Pipe cap removed with wrench
Grooves filed in pipe to create shrapnel
BLACK POWDER
ONE CASE
Stairs
THE DETONATOR
Wood screw in watch face
Wristwatch minute hand removed
12
3
4
5
6
7
8
9
BATTERY
Flashbulb
NOT TO SCALE

- Entire hand rail is made from standard steel plumbing pipe and fittings. Common in domestic settings.

- Pipe is filled halfway with powder, wristwatch detonator is tossed in, rest of pipe is filled with powder.

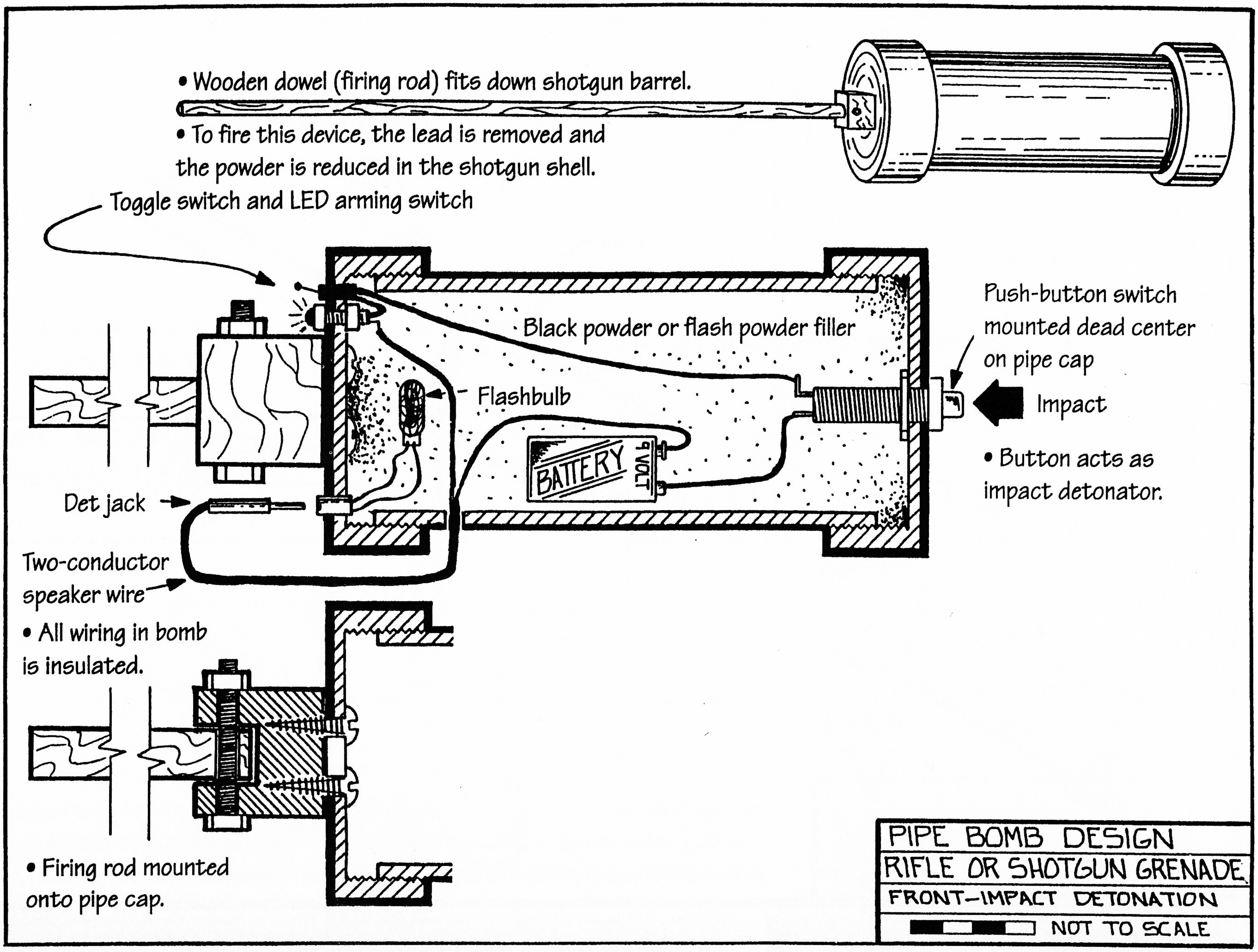
READY-MADE PIPE BOMBS
JUST ADD POWDER & DETONATOR
VERY DECEPTIVE DEVICES

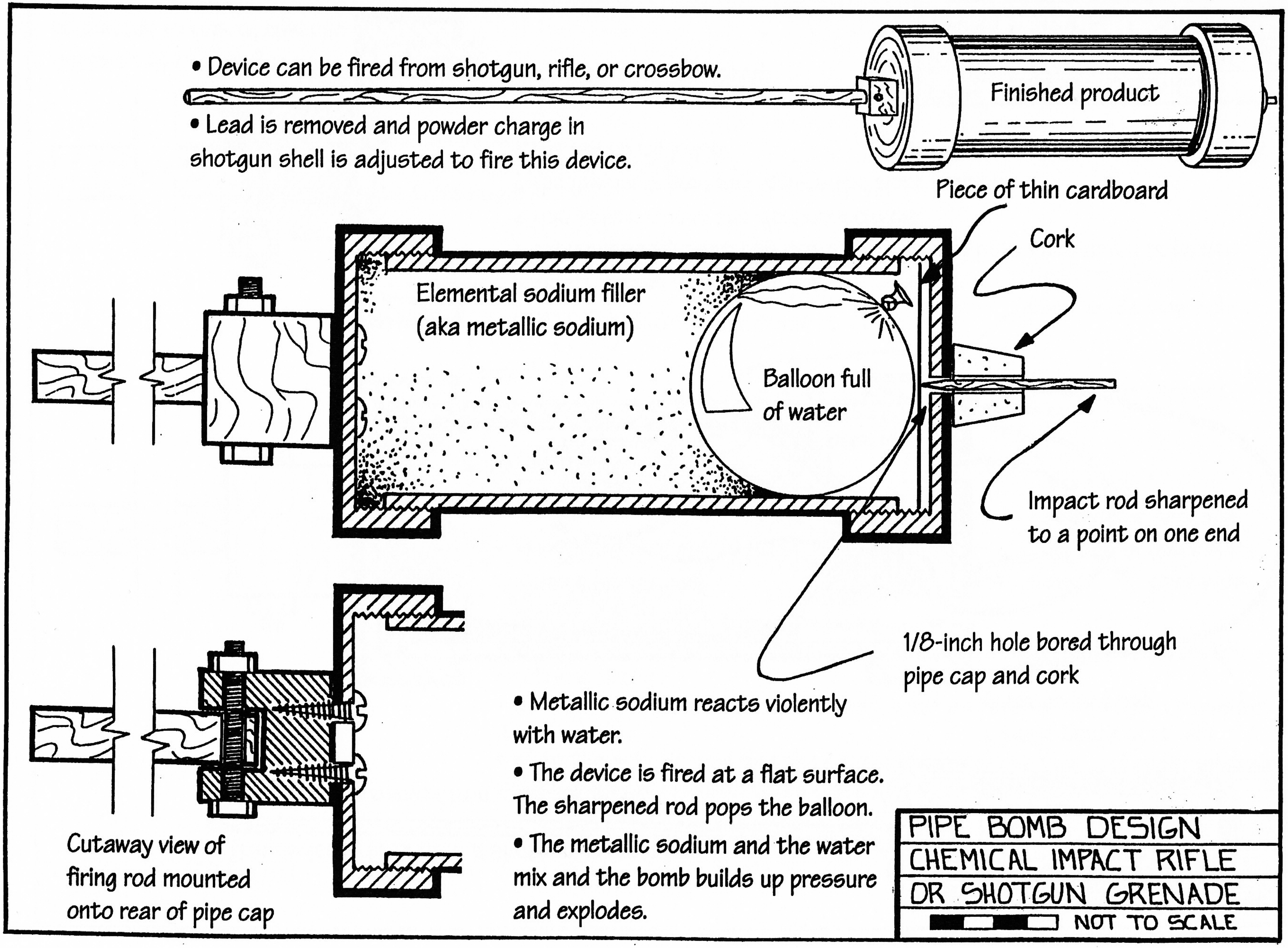
- Alternative to threading rifle barrel: Three holes are bored in the small end of the reducer coupling. The same size bolts are inserted in these holes. This is slipped over the rifle barrel and the bolts tightened. The device is ready for use.


Bolts (3)
Reducer coupling (top view)
Pipe bomb rigged to detonate on impact
Pipe threaded on at least one end
Reducer coupling
Rifle barrel threaded on the end to accept pipe reducer

RIFLE GRENADE ADAPTOR
IMPROVISED MODIFICATION
NOT TO SCALE

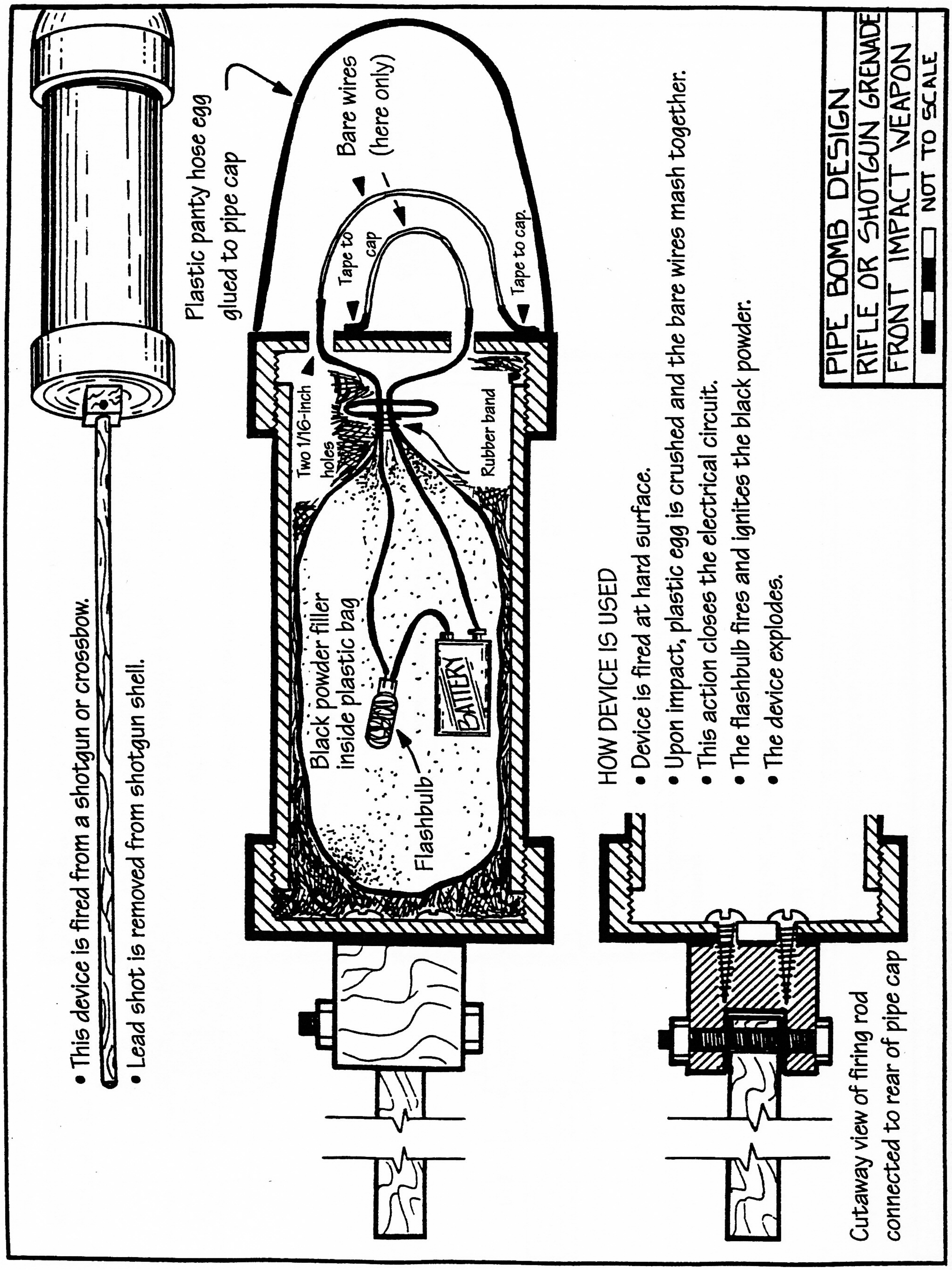
- Lead is removed from rifle bullets.

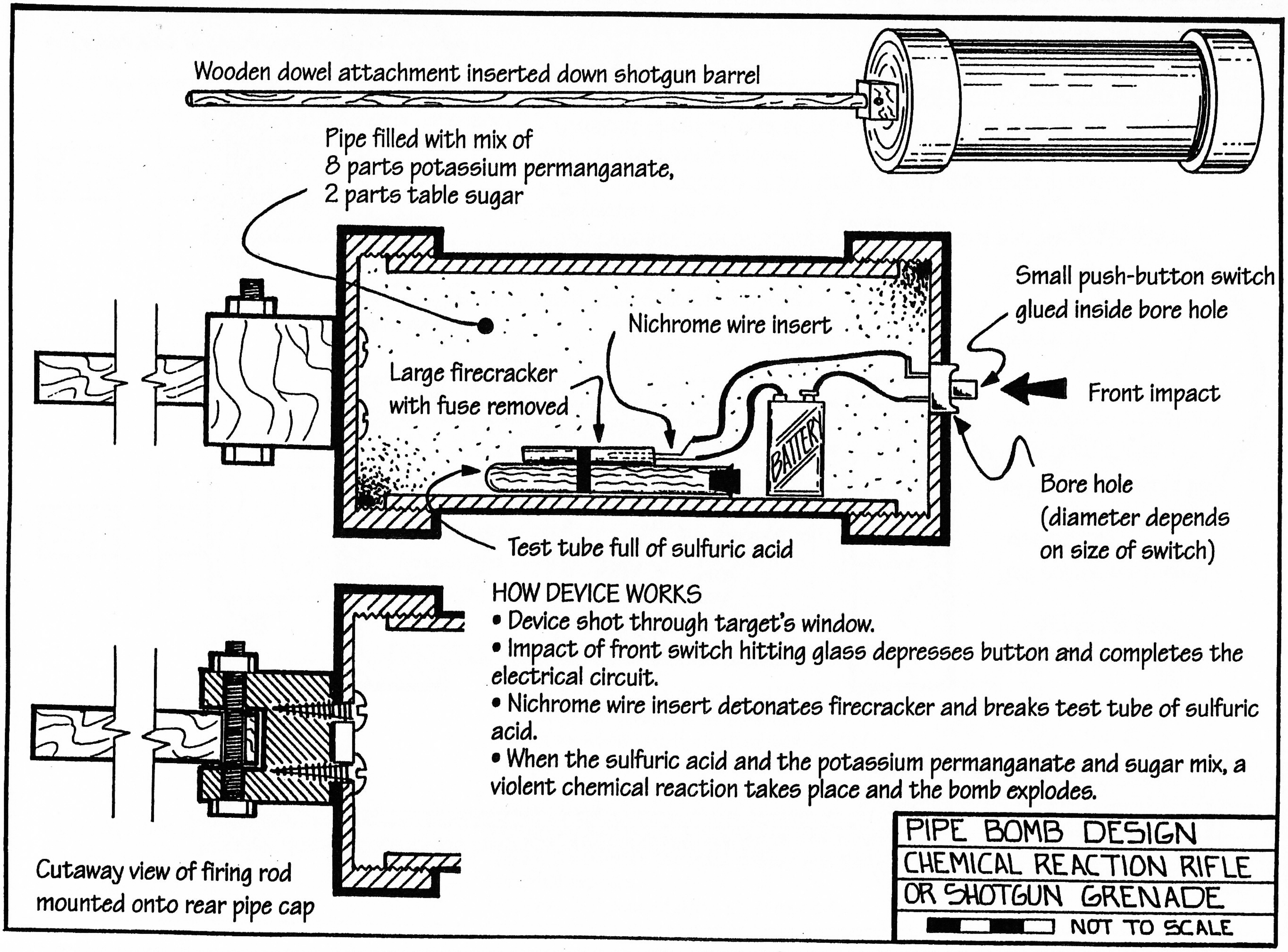

• Wooden dowel (firing rod) fits down shotgun barrel.
• To fire this device, the lead is removed and the powder is reduced in the shotgun shell.
Toggle switch and LED arming switch
Black powder or flash powder filler
Push-button switch mounted dead center on pipe cap
Impact
• Button acts as impact detonator.
Flashbulb
BATTERY
9 VOLT
Det jack
Two-conductor speaker wire
• All wiring in bomb is insulated.
• Firing rod mounted onto pipe cap.
PIPE BOMB DESIGN
RIFLE OR SHOTGUN GRENADE
FRONT-IMPACT DETONATION
NOT TO SCALE


Finished product
Piece of thin cardboard
Cork
Elemental sodium filler
(aka metallic sodium)
Balloon full of water
Impact rod sharpened to a point on one end
1/8-inch hole bored through pipe cap and cork
Cutaway view of firing rod mounted onto rear of pipe cap
PIPE BOMB DESIGN
CHEMICAL IMPACT RIFLE
OR SHOTGUN GRENADE
NOT TO SCALE

- Device can be fired from shotgun, rifle, or crossbow.
- Lead is removed and powder charge in shotgun shell is adjusted to fire this device.

- Metallic sodium reacts violently with water.
- The device is fired at a flat surface. The sharpened rod pops the balloon.
- The metallic sodium and the water mix and the bomb builds up pressure and explodes.

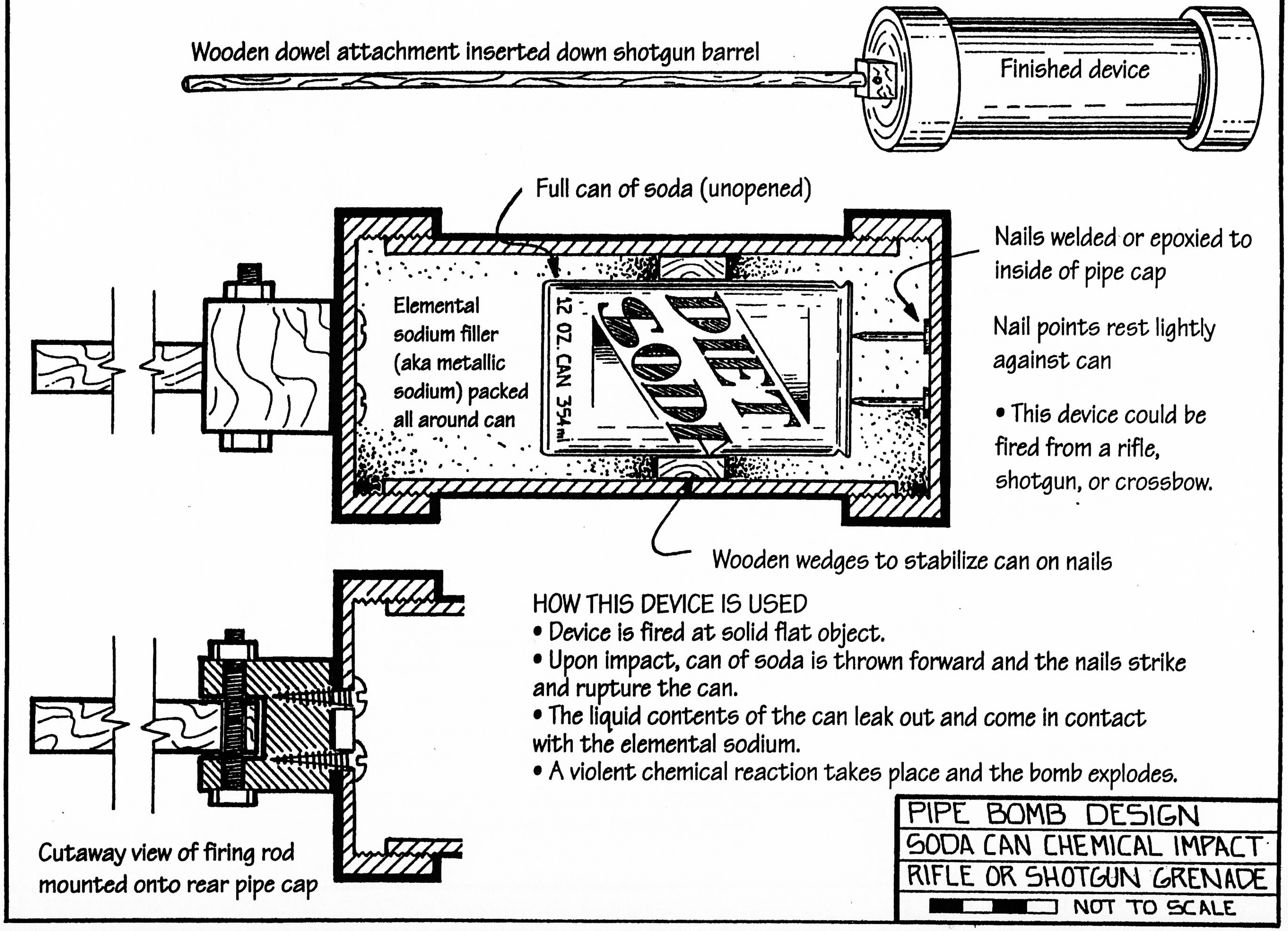



Wooden dowel attachment inserted down shotgun barrel
Pipe filled with mix of 8 parts potassium permanganate, 2 parts table sugar
Nichrome wire insert
Large firecracker with fuse removed
BATTERY
Small push-button switch glued inside bore hole
Front impact
Bore hole (diameter depends on size of switch)
Test tube full of sulfuric acid
Cutaway view of firing rod mounted onto rear pipe cap

HOW DEVICE WORKS

- Device shot through target's window.
- Impact of front switch hitting glass depresses button and completes the electrical circuit.
- Nichrome wire insert detonates firecracker and breaks test tube of sulfuric acid.
- When the sulfuric acid and the potassium permanganate and sugar mix, a violent chemical reaction takes place and the bomb explodes.

PIPE BOMB DESIGN
CHEMICAL REACTION RIFLE
OR SHOTGUN GRENADE
NOT TO SCALE

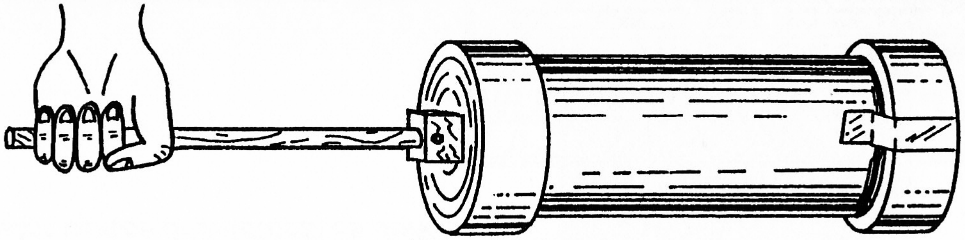

Wooden dowel attachment inserted down shotgun barrel
Finished device
Full can of soda (unopened)
Nails welded or epoxied to inside of pipe cap
Nail points rest lightly against can
Elemental sodium filler (aka metallic sodium) packed all around can
12 OZ. CAN 354 ml
DIET SODA
Wooden wedges to stabilize can on nails
Cutaway view of firing rod mounted onto rear pipe cap

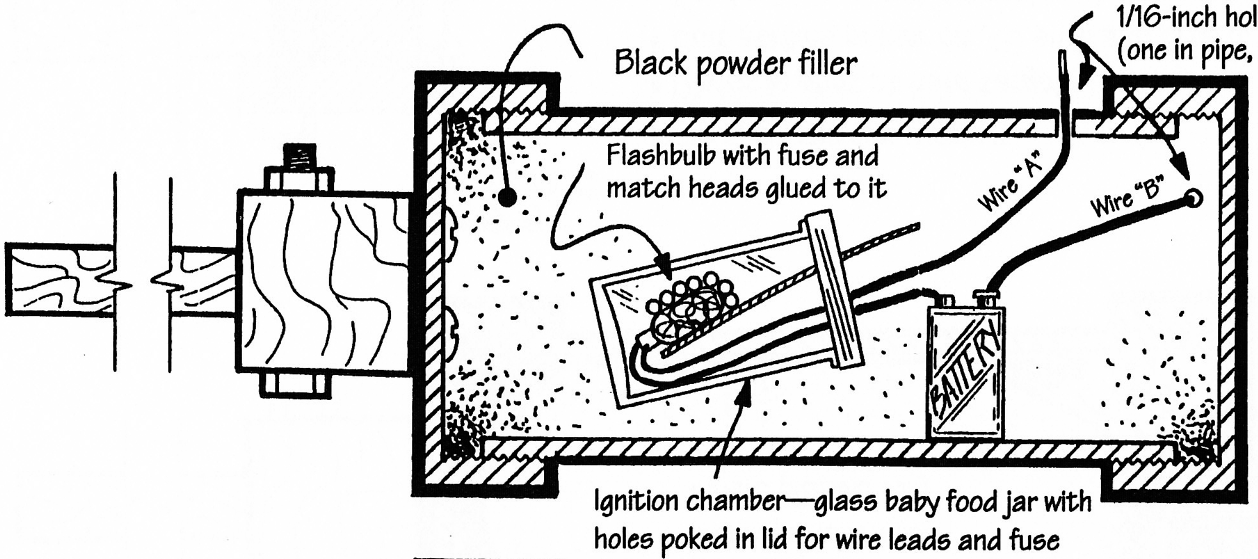
- This device could be fired from a rifle, shotgun, or crossbow.

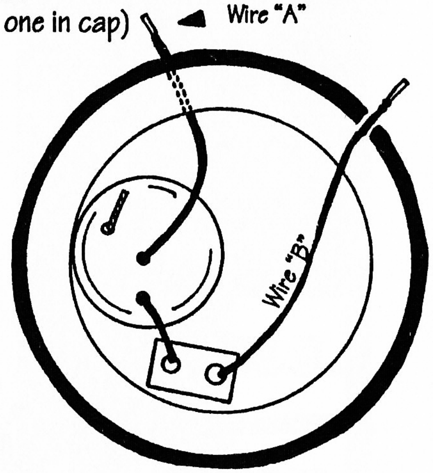
HOW THIS DEVICE IS USED
- Device is fired at solid flat object.
- Upon impact, can of soda is thrown forward and the nails strike and rupture the can.
- The liquid contents of the can leak out and come in contact with the elemental sodium.
- A violent chemical reaction takes place and the bomb explodes.

PIPE BOMB DESIGN
SODA CAN CHEMICAL IMPACT
RIFLE OR SHOTGUN GRENADE
NOT TO SCALE

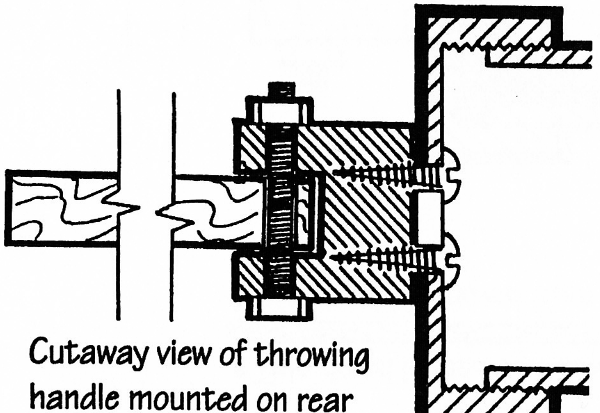
- A pipe bomb can be thrown a much greater distance with a handle attached to it.
- This is a slightly updated version of the old German World War II "potato masher" grenade.




Black powder filler
1/16-inch holes
(one in pipe, one in cap)
Flashbulb with fuse and
match heads glued to it
Wire "A"
Wire "B"
BATTERY
Ignition chamber—glass baby food jar with
holes poked in lid for wire leads and fuse

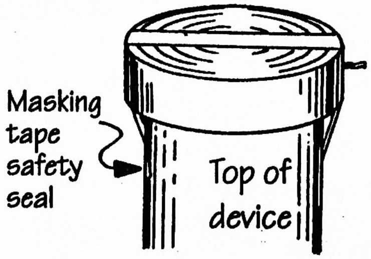

Wire "A"
Wire "B"

Top cutaway view

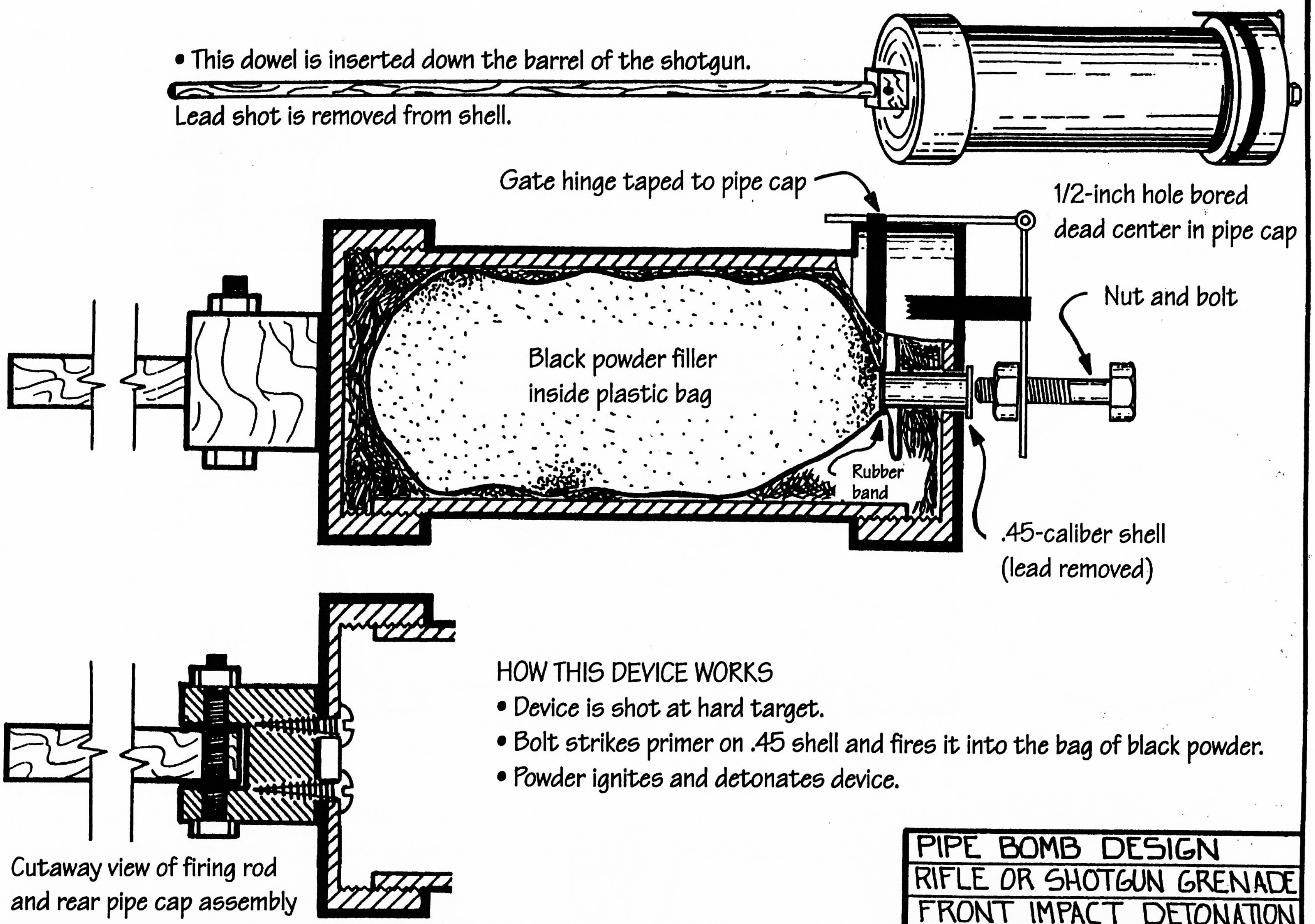


Cutaway view of throwing handle mounted on rear pipe cap

HOW DEVICE IS USED
- Upper pipe cap is twisted to break masking tape seal.
- This action brings wires "A" and "B" together. They only need to touch for a second.
- As those wires touch, the flashbulb will fire and ignite the match heads and the fuse.
- The device is thrown by the handle at a distant target.
- Once the fuse burns out of the jar and past the lid, it will ignite the black powder and the bomb will explode.
- Approx. 3-5 second delay after cap twist.


Masking
tape
safety
seal
Top of
device

PIPE BOMB DESIGN
IMPROVISED WWII GERMAN GRENADE
INGENIOUS CONSTRUCTION METHOD
▬▭▬▭ NOT TO SCALE


• This dowel is inserted down the barrel of the shotgun.
Lead shot is removed from shell.
Gate hinge taped to pipe cap
1/2-inch hole bored dead center in pipe cap
Nut and bolt
Black powder filler inside plastic bag
Rubber band
.45-caliber shell (lead removed)

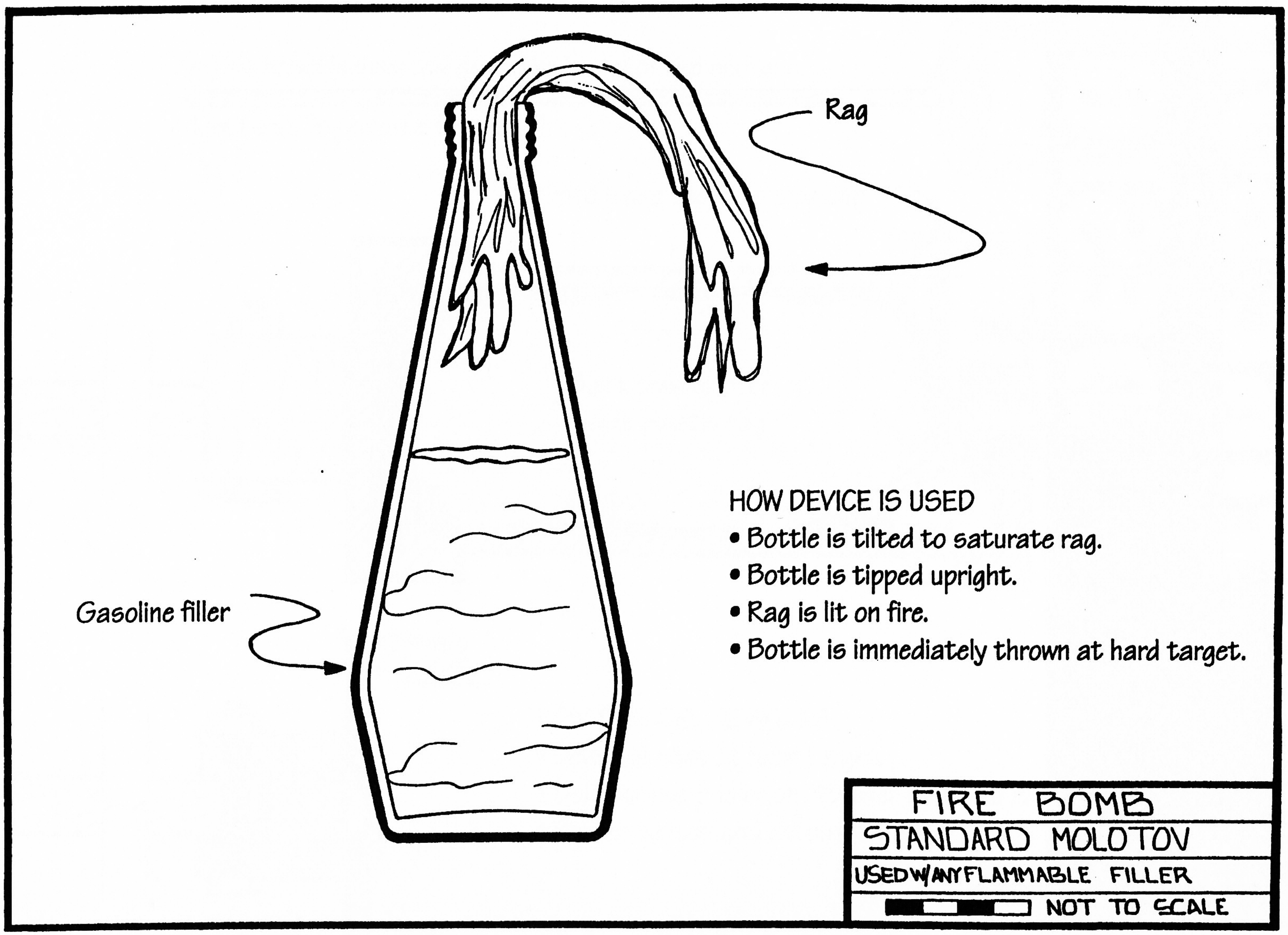
Cutaway view of firing rod and rear pipe cap assembly

HOW THIS DEVICE WORKS

- Device is shot at hard target.
- Bolt strikes primer on .45 shell and fires it into the bag of black powder.
- Powder ignites and detonates device.

PIPE BOMB DESIGN
RIFLE OR SHOTGUN GRENADE
FRONT IMPACT DETONATION
NOT TO SCALE

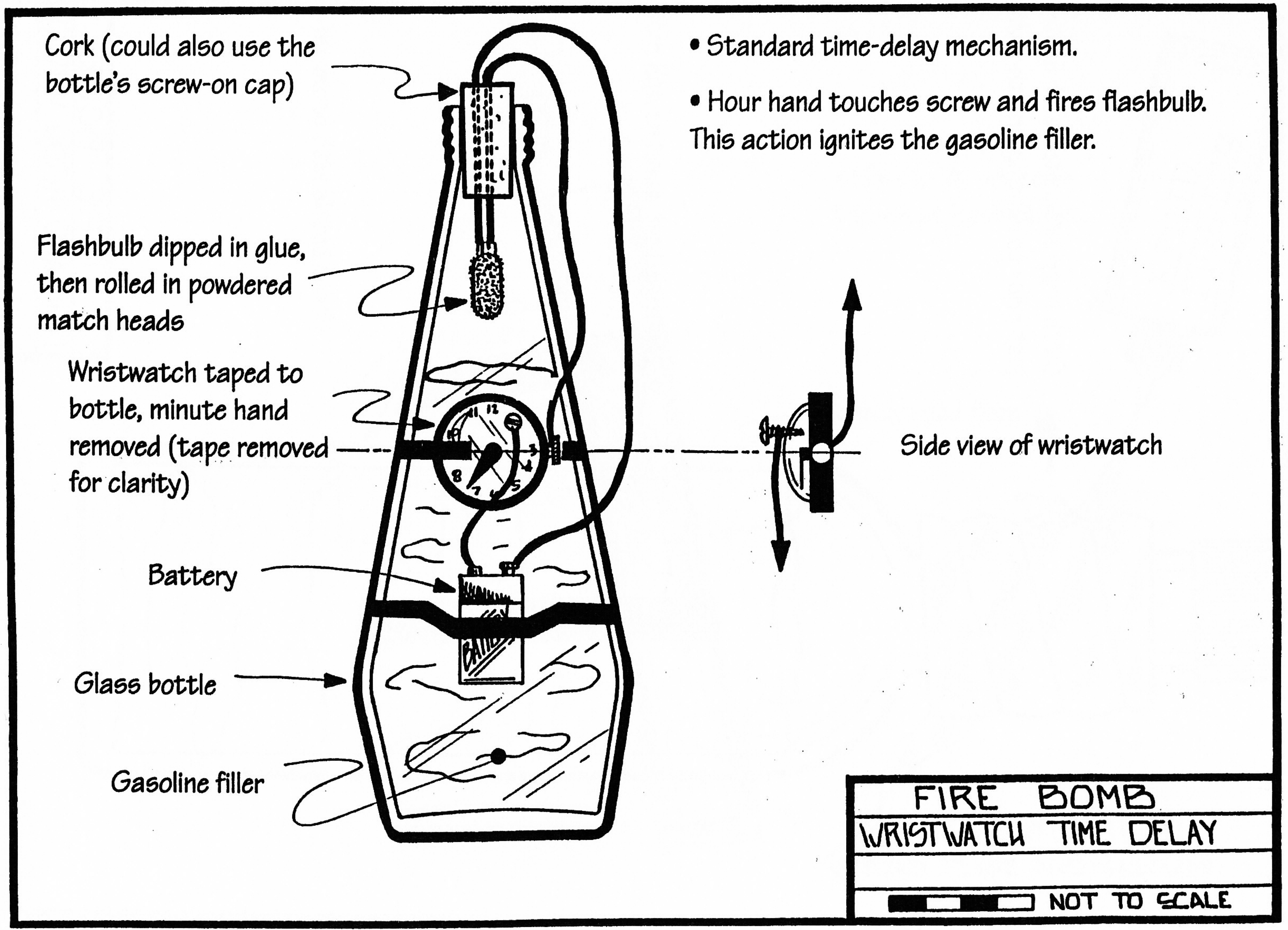
FIRE BOMB DESIGNS



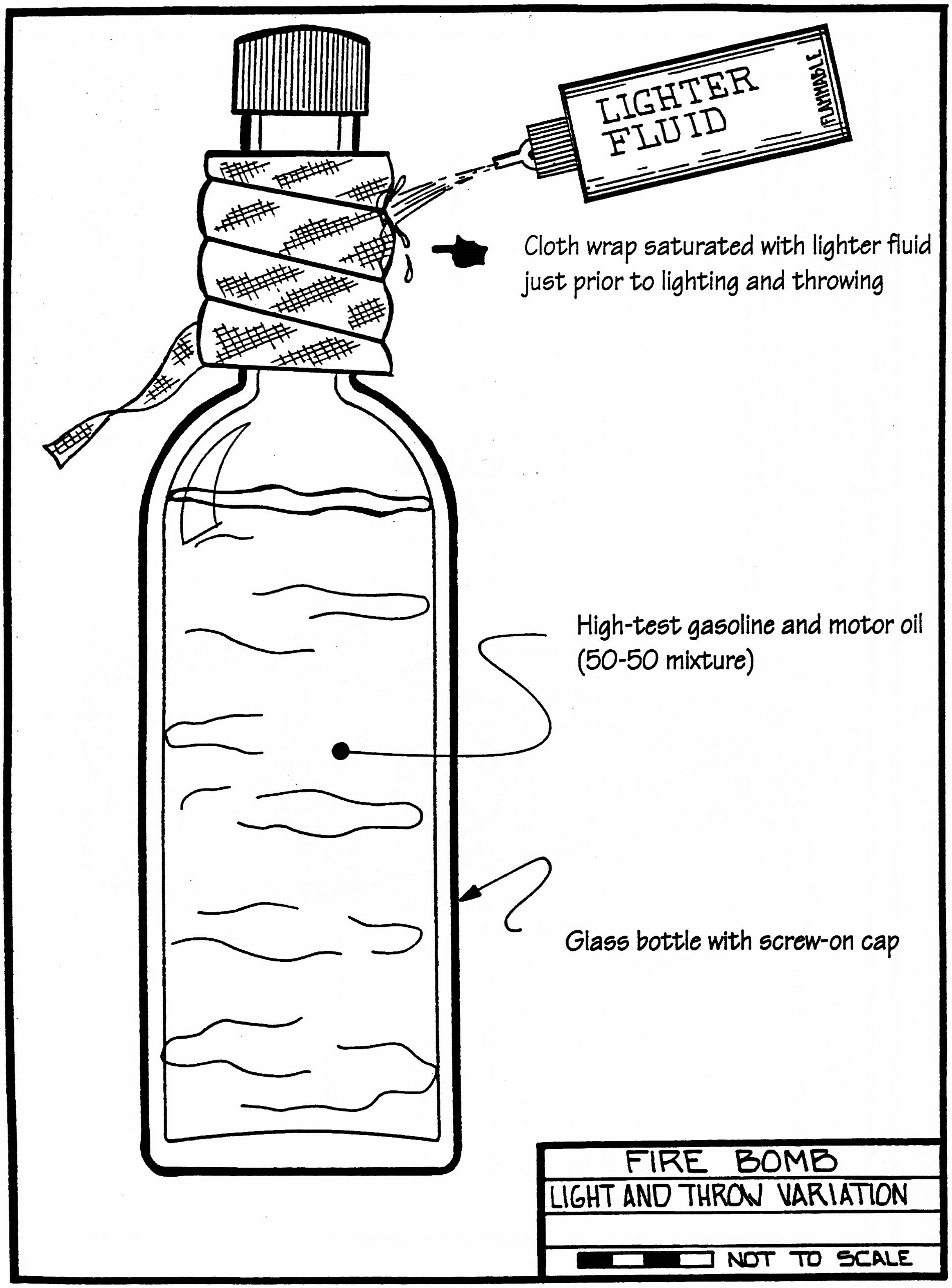
HOW DEVICE IS USED

- Bottle is tilted to saturate rag.
- Bottle is tipped upright.
- Rag is lit on fire.
- Bottle is immediately thrown at hard target.

FIRE BOMB
STANDARD MOLOTOV
USED W/ANY FLAMMABLE FILLER
NOT TO SCALE


Cork (could also use the bottle's screw-on cap)
Flashbulb dipped in glue, then rolled in powdered match heads
Wristwatch taped to bottle, minute hand removed (tape removed for clarity)
Battery
Glass bottle
Gasoline filler
Side view of wristwatch
FIRE BOMB
WRISTWATCH TIME DELAY
NOT TO SCALE

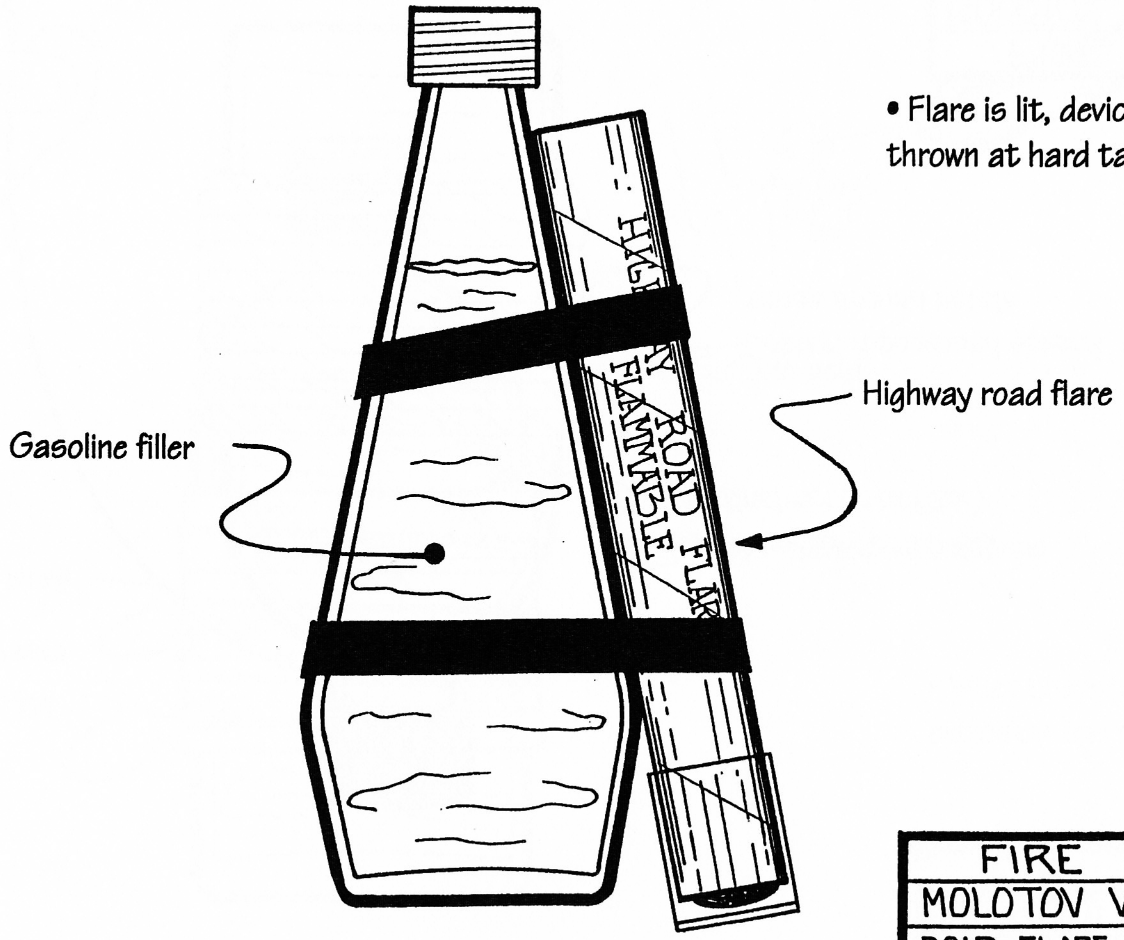
- Standard time-delay mechanism.
- Hour hand touches screw and fires flashbulb. This action ignites the gasoline filler.


LIGHTER FLUID
FLAMMABLE
FIRE BOMB
LIGHT AND THROW VARIATION
NOT TO SCALE

Cloth wrap saturated with lighter fluid just prior to lighting and throwing

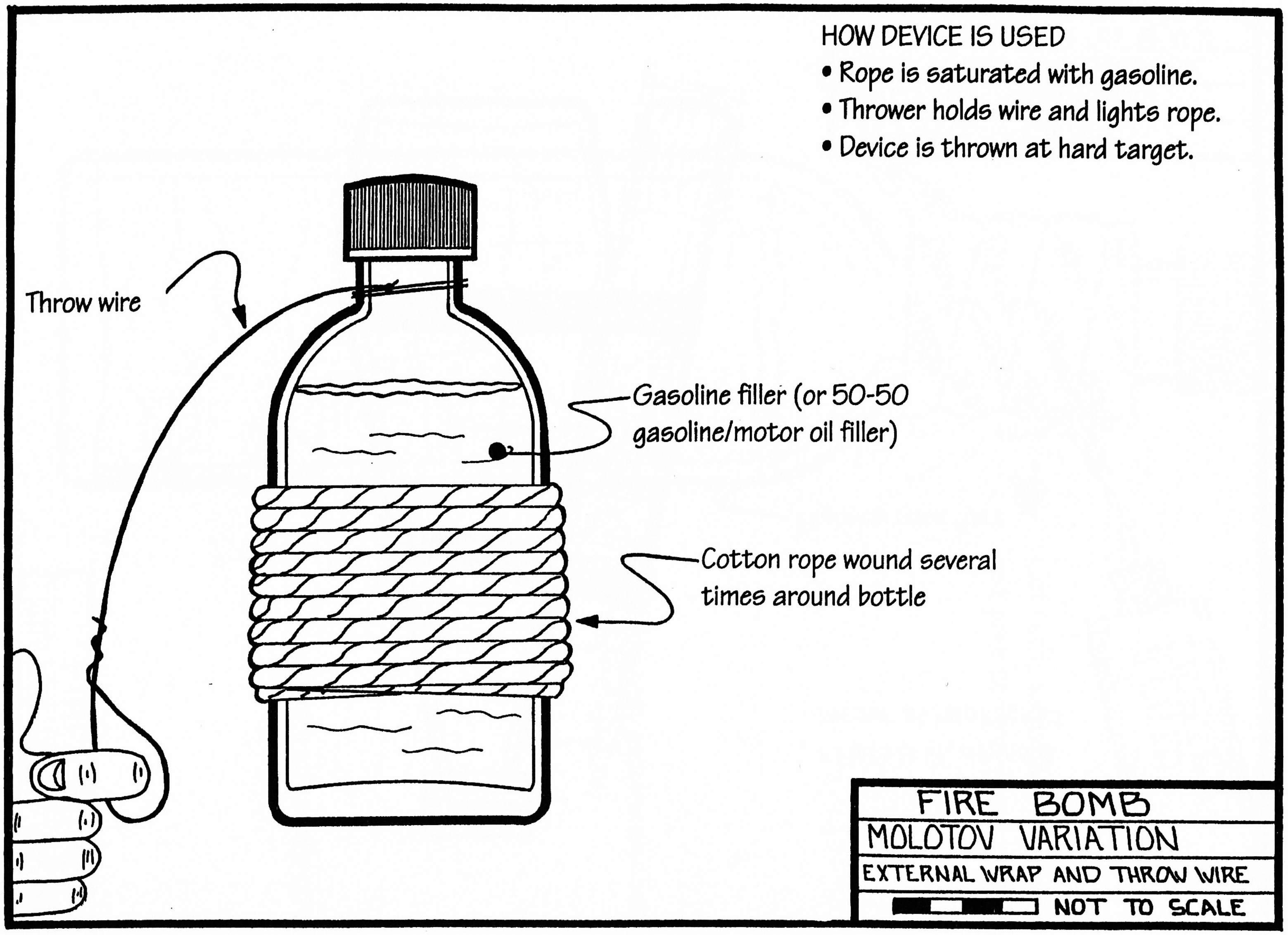
High-test gasoline and motor oil (50-50 mixture)

Glass bottle with screw-on cap


HIGHWAY ROAD FLARE
FLAMMABLE
Gasoline filler
Highway road flare

- Flare is lit, device is thrown at hard target.

FIRE BOMB
MOLOTOV VARIATION
ROAD FLARE AND GASOLINE
NOT TO SCALE

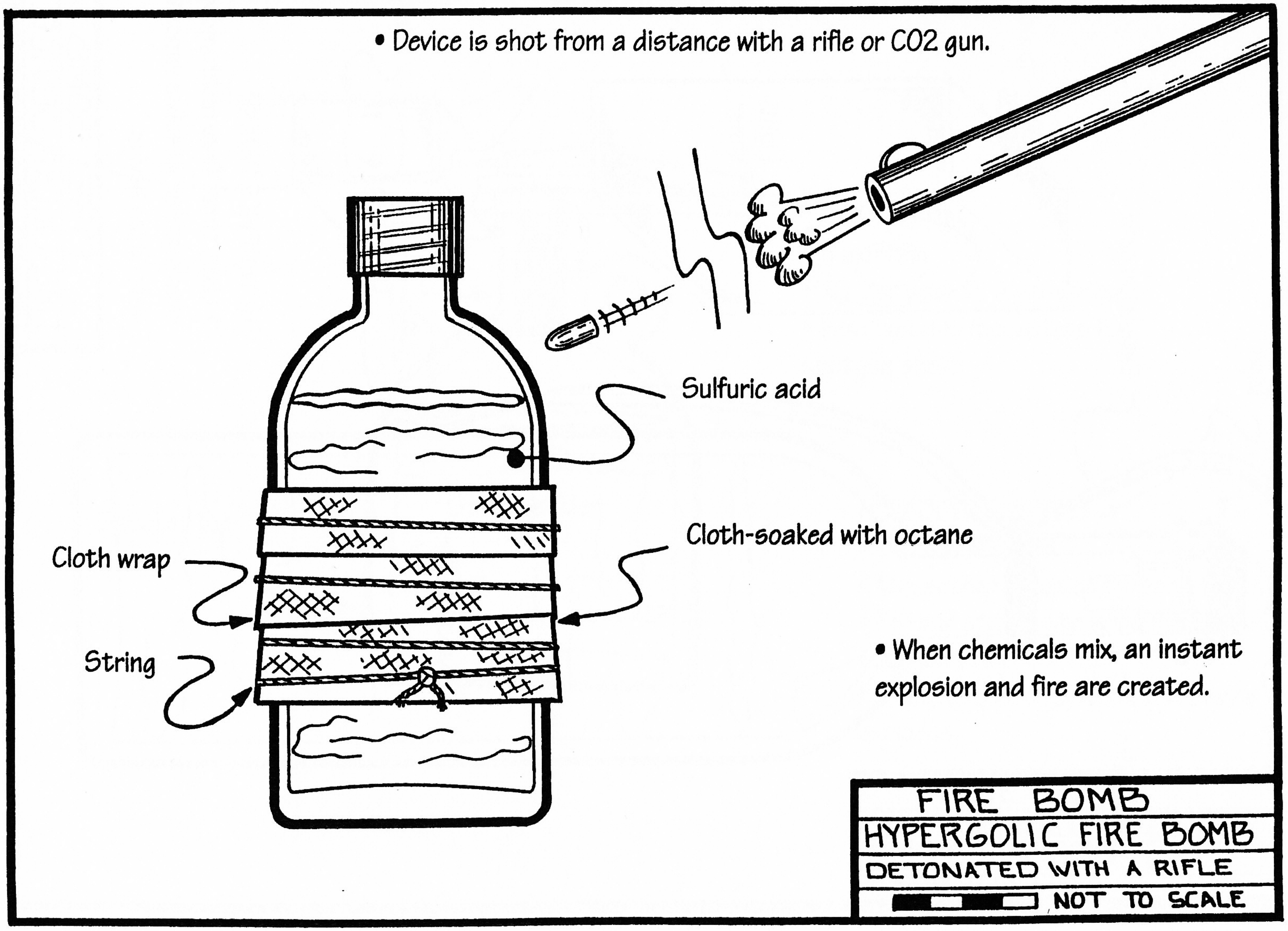


Throw wire
Gasoline filler (or 50-50 gasoline/motor oil filler)
Cotton rope wound several times around bottle

HOW DEVICE IS USED

- Rope is saturated with gasoline.
- Thrower holds wire and lights rope.
- Device is thrown at hard target.

FIRE BOMB
MOLOTOV VARIATION
EXTERNAL WRAP AND THROW WIRE
NOT TO SCALE


Sulfuric acid
Cloth-soaked with octane
Cloth wrap
String

- Device is shot from a distance with a rifle or CO2 gun.

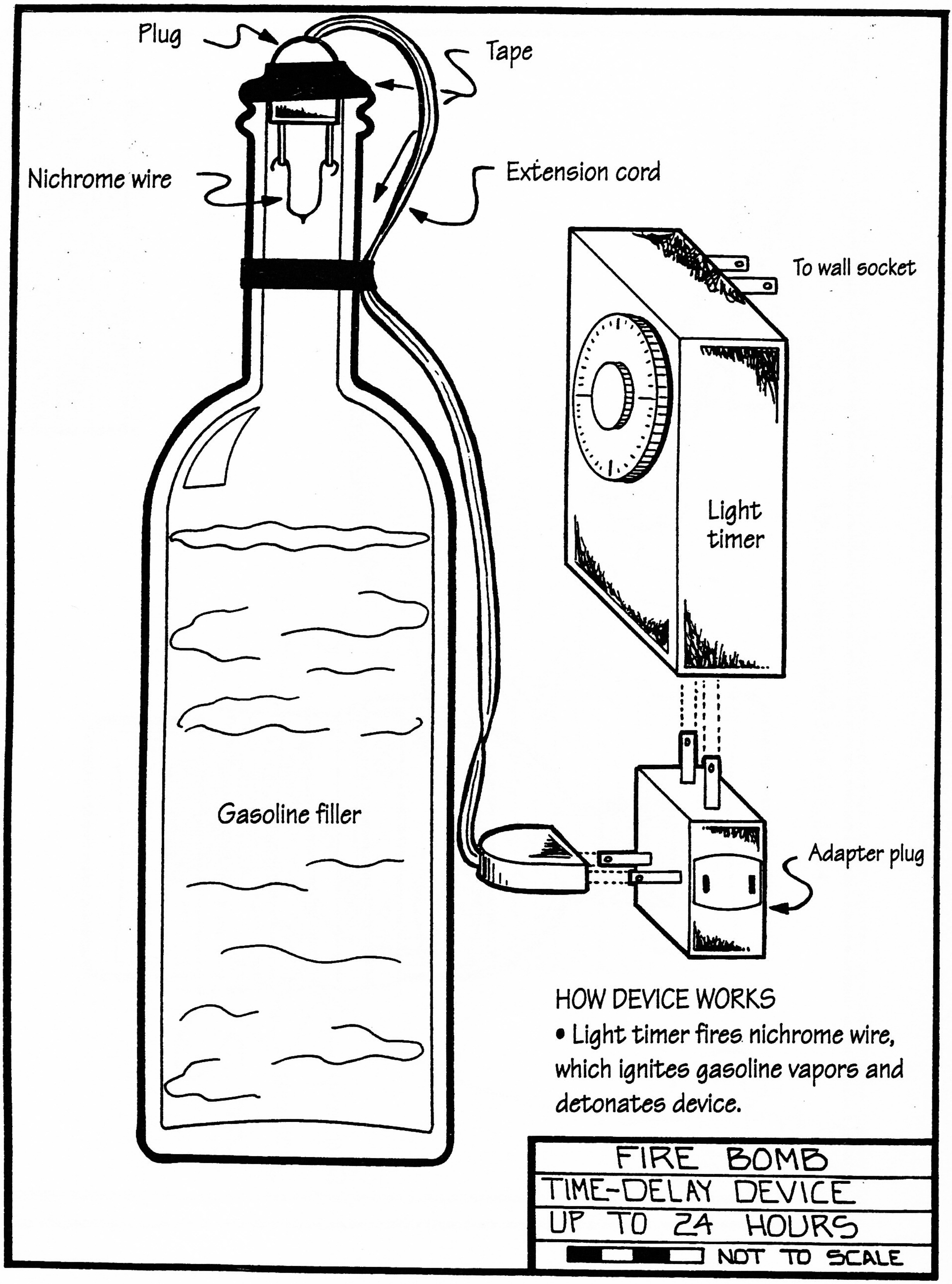
- When chemicals mix, an instant explosion and fire are created.

FIRE BOMB

HYPERGOLIC FIRE BOMB

DETONATED WITH A RIFLE

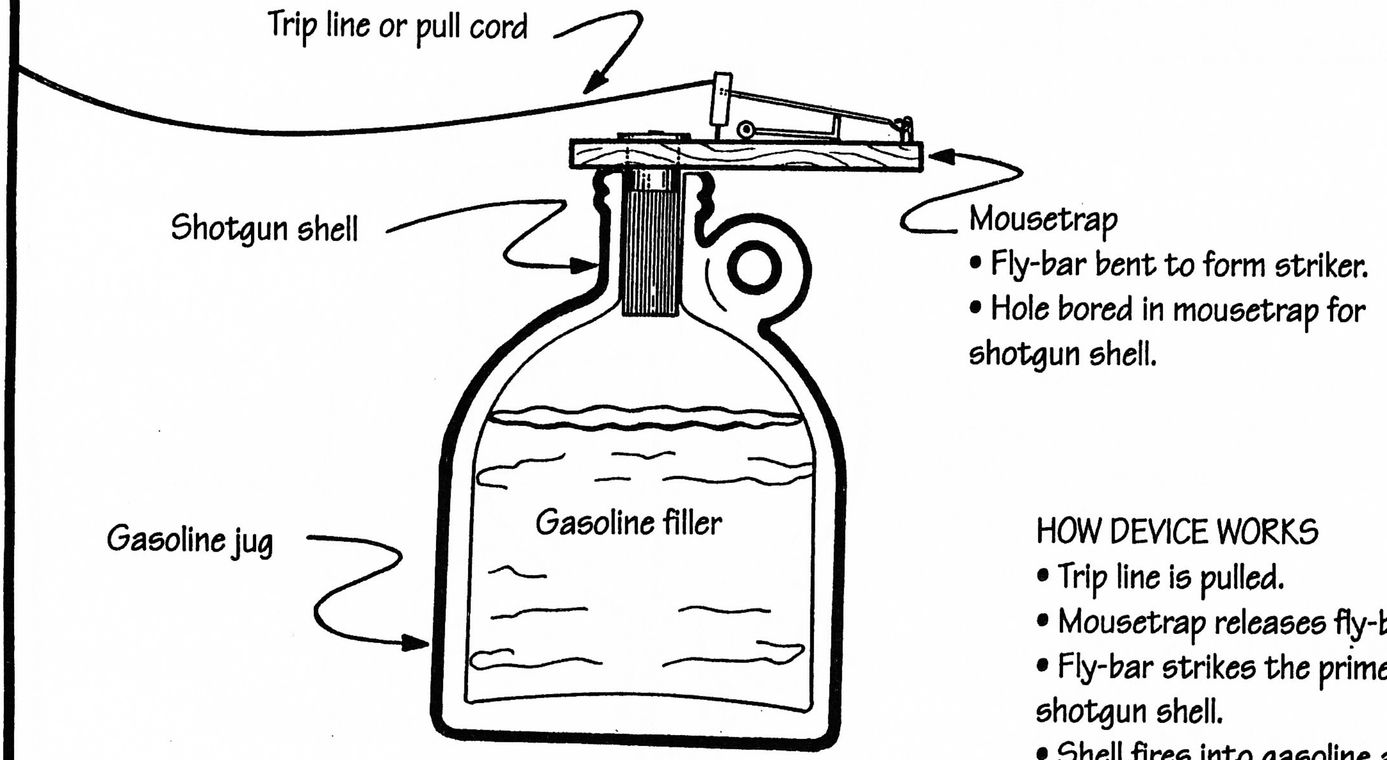
NOT TO SCALE


Plug
Tape
Nichrome wire
Extension cord
To wall socket
Light timer
Gasoline filler
Adapter plug

HOW DEVICE WORKS

- Light timer fires nichrome wire, which ignites gasoline vapors and detonates device.

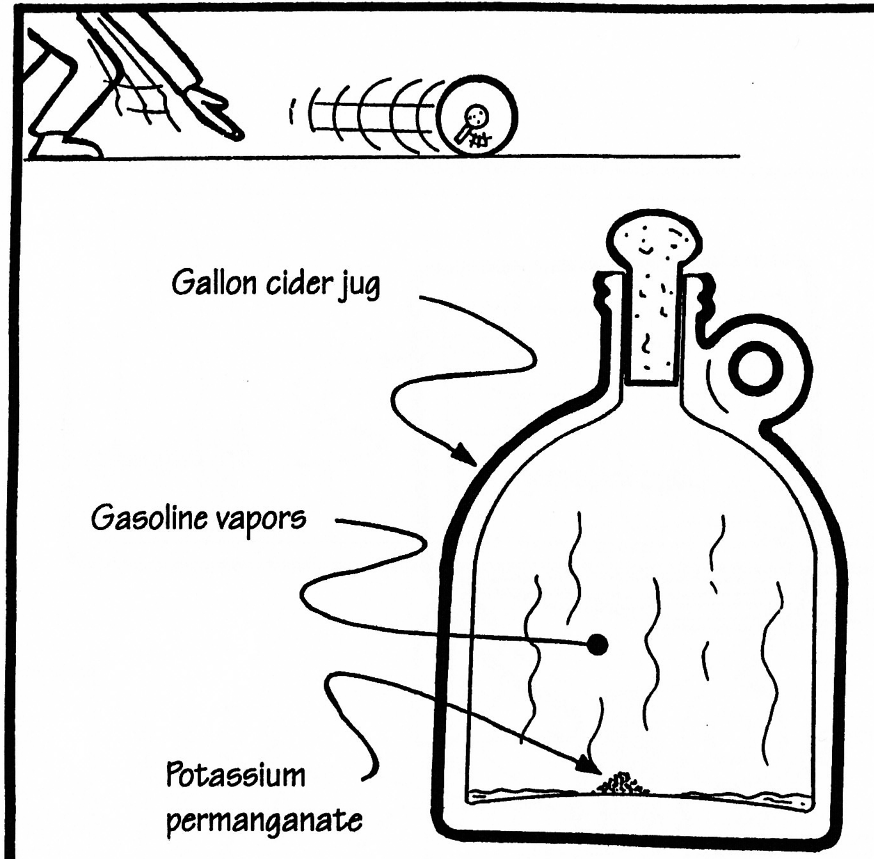
FIRE BOMB
TIME-DELAY DEVICE
UP TO 24 HOURS
NOT TO SCALE


Trip line or pull cord
Shotgun shell
Gasoline jug
Gasoline filler
Mousetrap

Mousetrap
- Fly-bar bent to form striker.
- Hole bored in mousetrap for shotgun shell.

HOW DEVICE WORKS
- Trip line is pulled.
- Mousetrap releases fly-bar/striker.
- Fly-bar strikes the primer on the shotgun shell.
- Shell fires into gasoline and device explodes.

FIRE BOMB
SHOTGUN SHELL MOUSETRAP
DEVICE WITH TRIP LINE
NOT TO SCALE

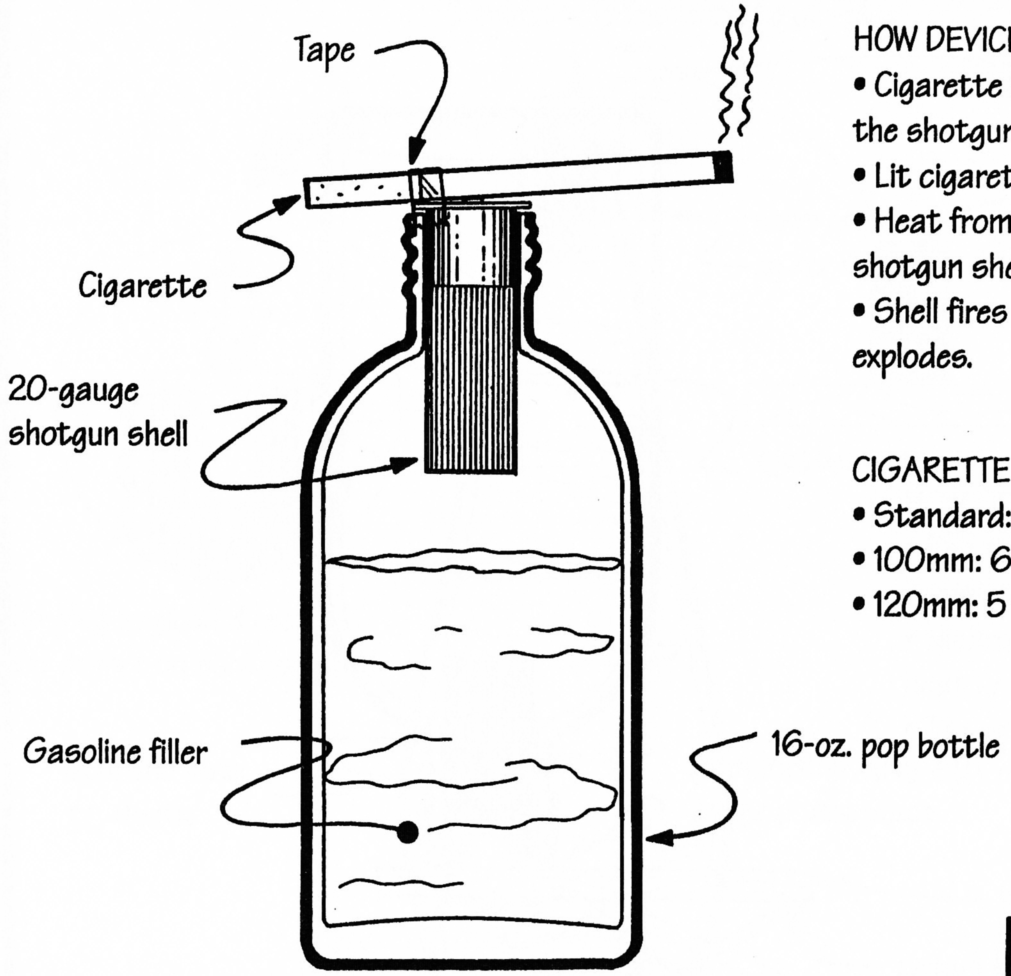

Gallon cider jug
Gasoline vapors
Potassium permanganate

HOW DEVICE IS USED

- Jug is filled with gasoline, gasoline is sloshed around to coat walls, then poured out.
- A pinch of potassium permanganate is tossed in immediately and the jug is closed with a cork.
- Jug explodes when it breaks against wall.

FIRE BOMB/
GENERAL EXPLOSIVE DEVICE

NOT TO SCALE


Tape
Cigarette
20-gauge shotgun shell
Gasoline filler
16-oz. pop bottle

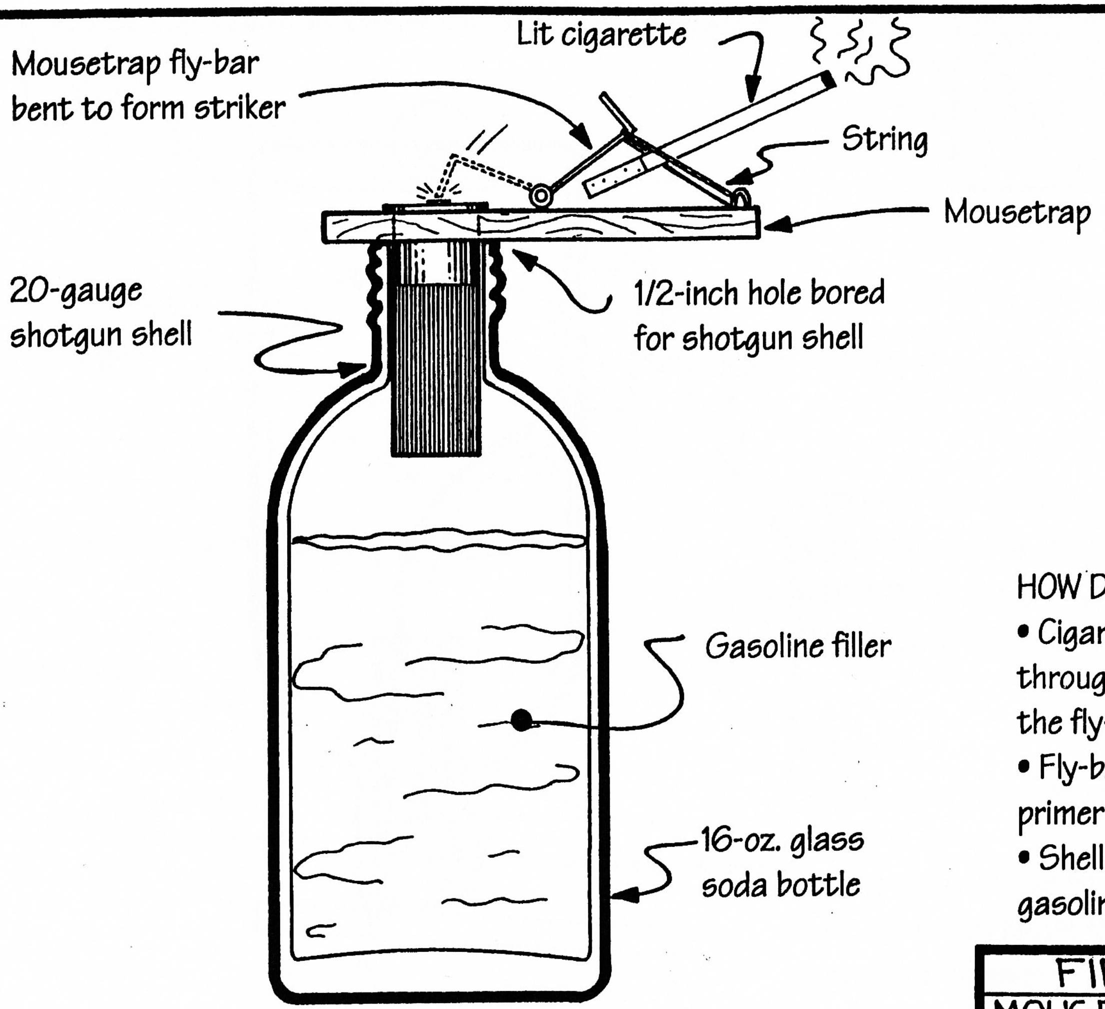
HOW DEVICE IS USED

- Cigarette is taped to the top of the shotgun shell.
- Lit cigarette burns down.
- Heat from cigarette fires primer on shotgun shell.
- Shell fires into gasoline and device explodes.

CIGARETTE DELAYS (from tip to butt)

- Standard: 3 1/2 to 5 minutes.
- 100mm: 6 to 8 minutes.
- 120mm: 5 to 7 minutes.

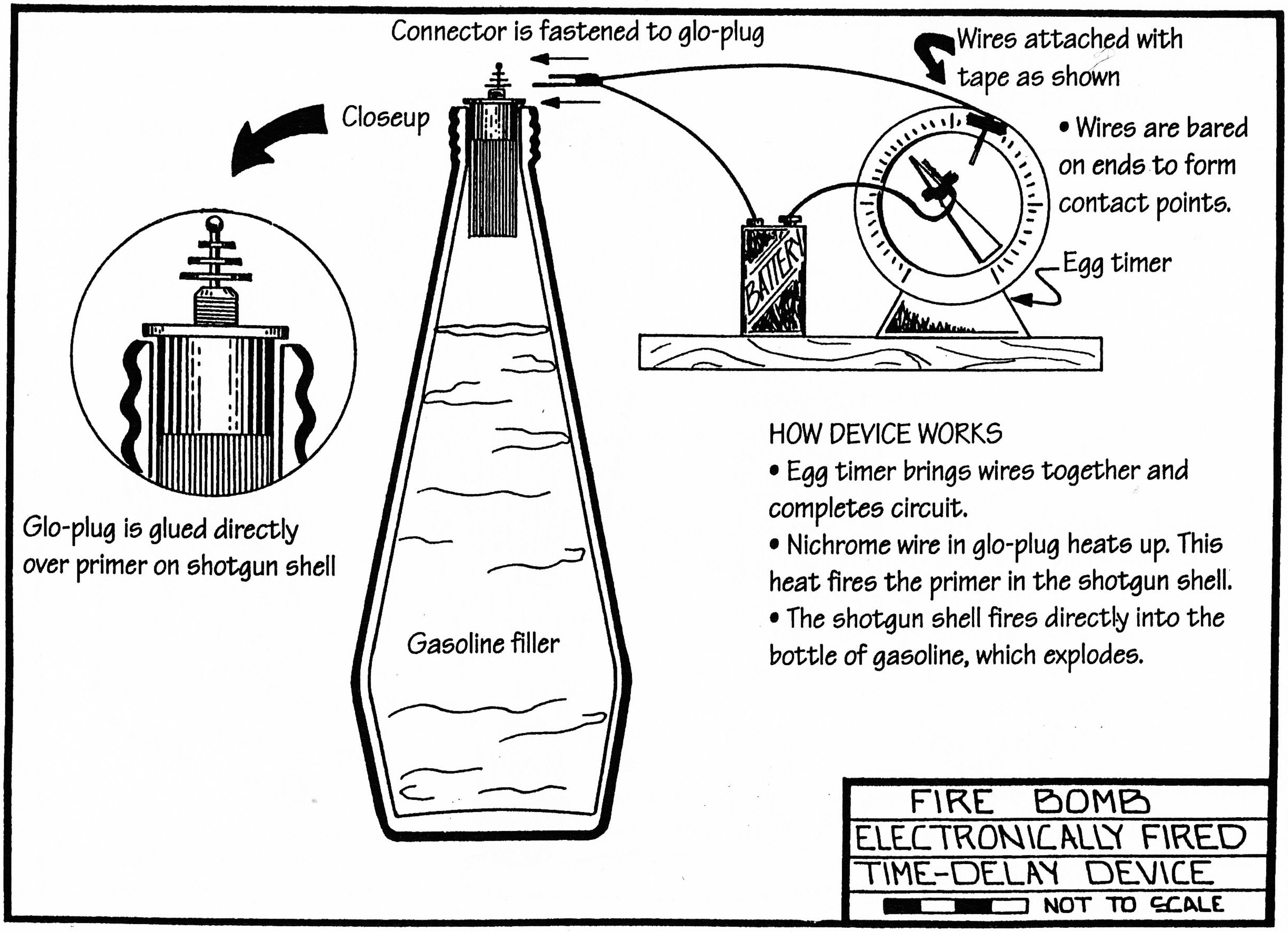
FIRE BOMB
CIGARETTE DELAY-HEAT
IGNITION DEVICE
NOT TO SCALE


Lit cigarette
Mousetrap fly-bar bent to form striker
String
Mousetrap
20-gauge shotgun shell
1/2-inch hole bored for shotgun shell
Gasoline filler
16-oz. glass soda bottle

HOW DEVICE WORKS

- Cigarette burns down and burns through string (which is holding the fly-bar under tension).
- Fly-bar is released and strikes primer on shotgun shell.
- Shell fires into pop bottle of gasoline and device explodes.

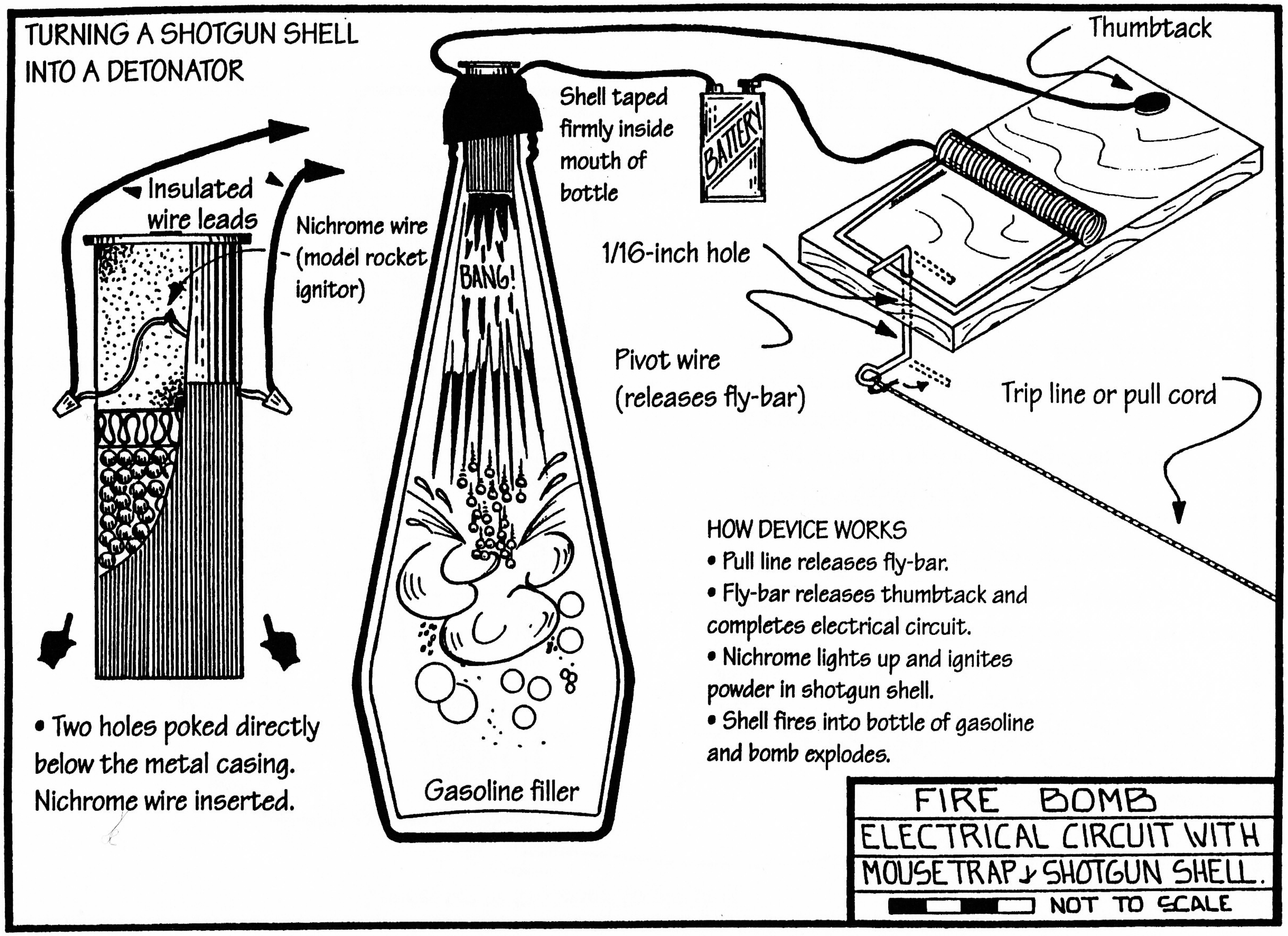
FIRE BOMB
MOUSETRAP AND SHOTGUN SHELL DEVICE
NOT TO SCALE


Connector is fastened to glo-plug
Wires attached with tape as shown
• Wires are bared on ends to form contact points.
Egg timer
BATTERY
Closeup
Glo-plug is glued directly over primer on shotgun shell
Gasoline filler
NOT TO SCALE

FIRE BOMB
ELECTRONICALLY FIRED
TIME-DELAY DEVICE

HOW DEVICE WORKS

- Egg timer brings wires together and completes circuit.
- Nichrome wire in glo-plug heats up. This heat fires the primer in the shotgun shell.
- The shotgun shell fires directly into the bottle of gasoline, which explodes.



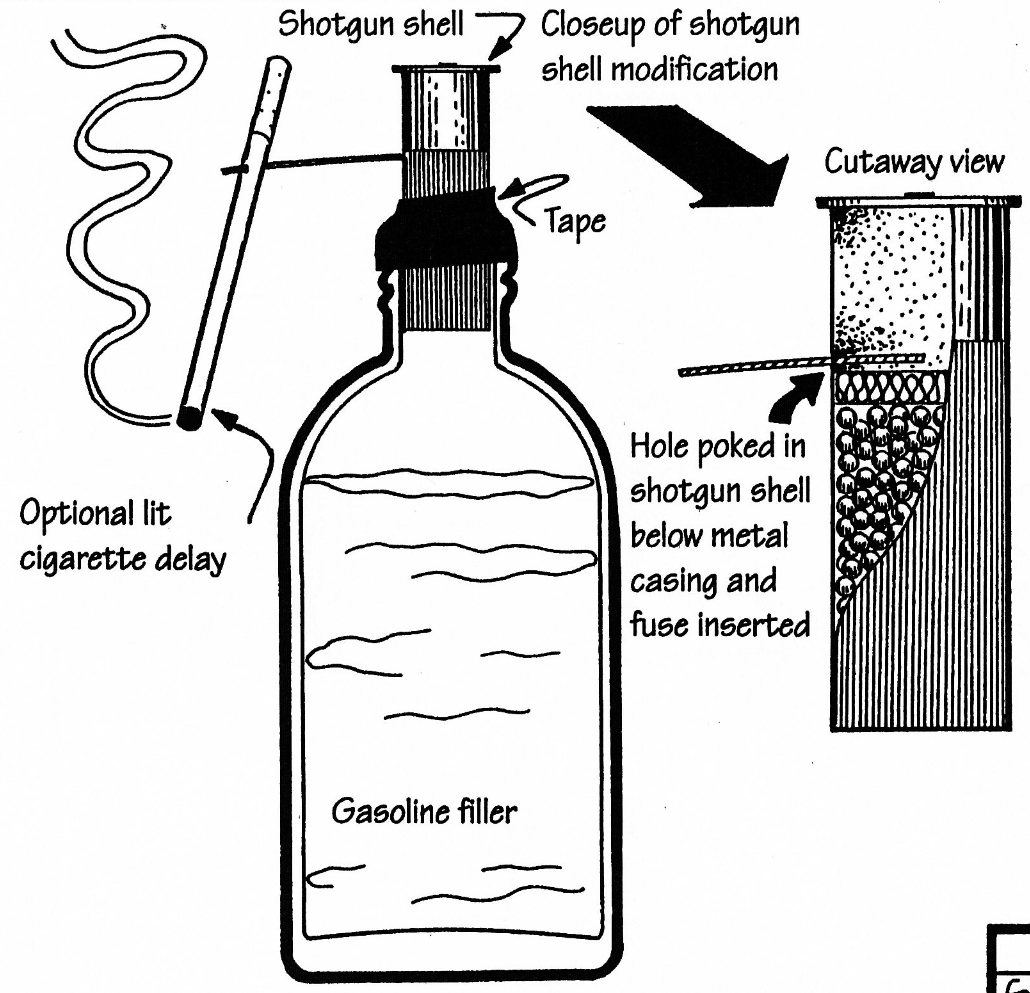
TURNING A SHOTGUN SHELL INTO A DETONATOR

Insulated wire leads
Nichrome wire (model rocket ignitor)
BANG!
Shell taped firmly inside mouth of bottle
BATTERY
Thumbtack
1/16-inch hole
Pivot wire (releases fly-bar)
Trip line or pull cord
Gasoline filler

- Two holes poked directly below the metal casing. Nichrome wire inserted.

HOW DEVICE WORKS
- Pull line releases fly-bar.
- Fly-bar releases thumbtack and completes electrical circuit.
- Nichrome lights up and ignites powder in shotgun shell.
- Shell fires into bottle of gasoline and bomb explodes.

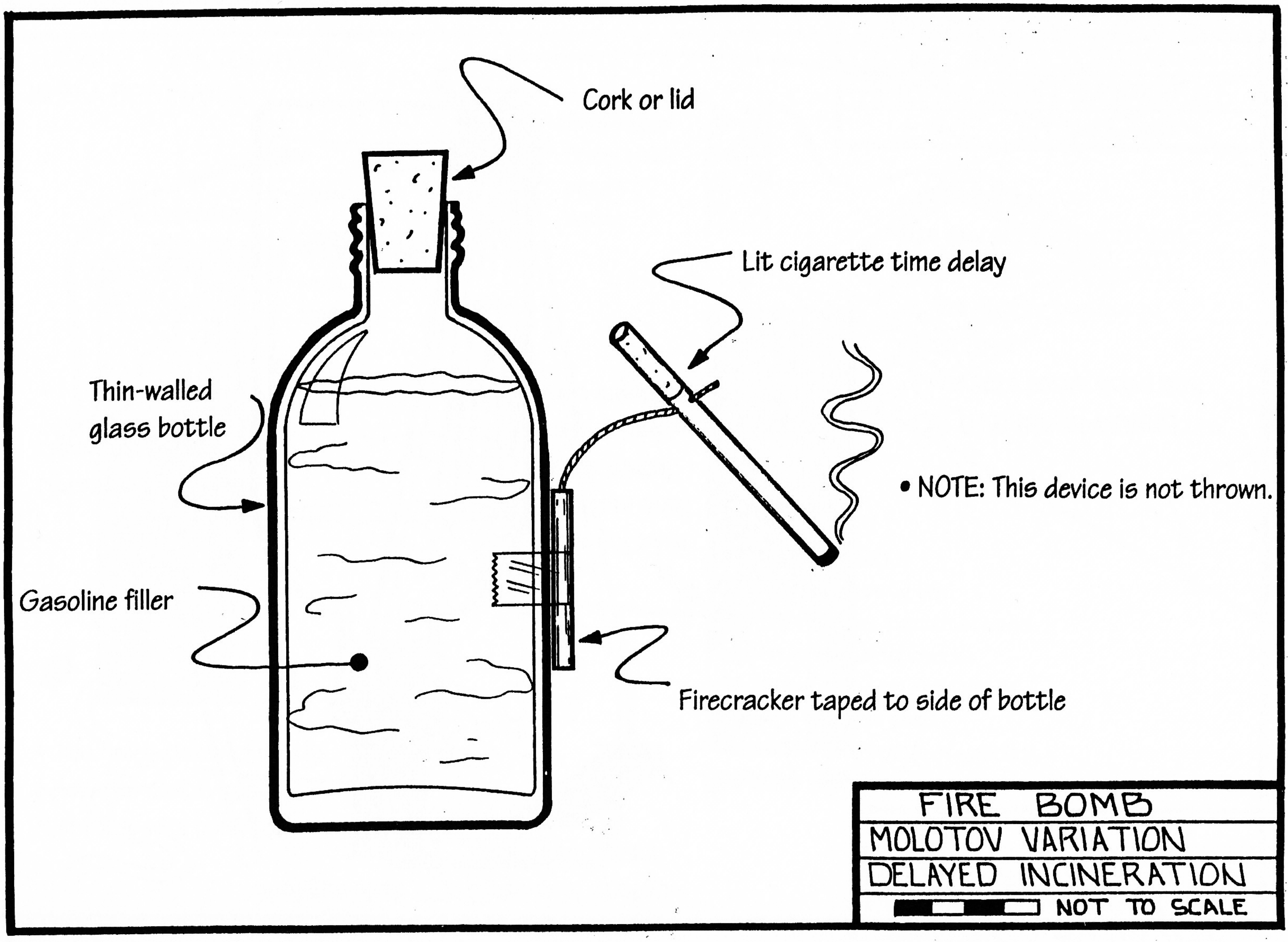
FIRE BOMB
ELECTRICAL CIRCUIT WITH
MOUSETRAP + SHOTGUN SHELL.
NOT TO SCALE

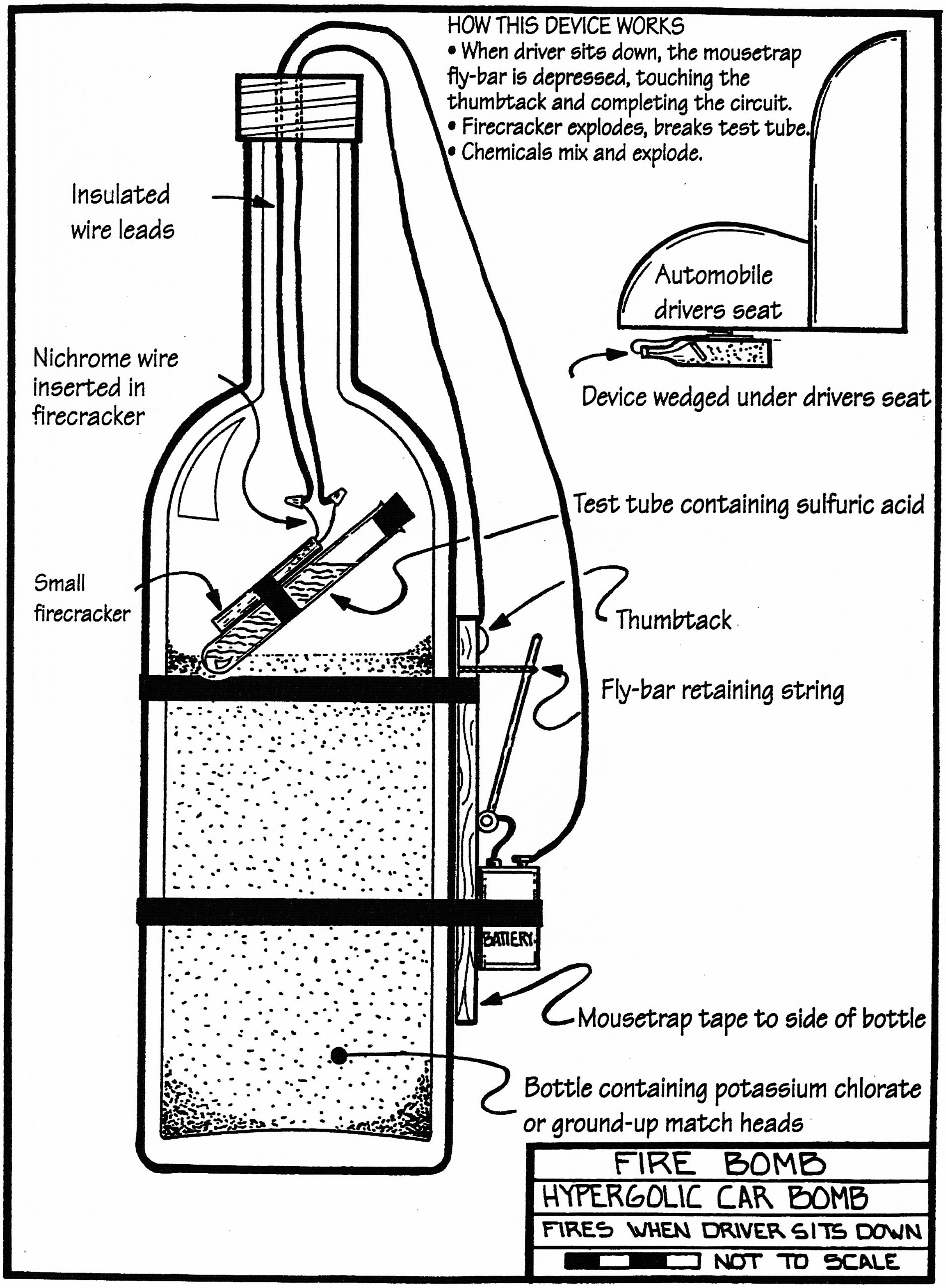

Shotgun shell
Closeup of shotgun shell modification
Cutaway view
Tape
Optional lit cigarette delay
Hole poked in shotgun shell below metal casing and fuse inserted
Gasoline filler

HOW THIS BOMB WORKS

- Cigarette burns down and lights fuse.
- Fuse ignites powder in shotgun shell and fires it into the bottle of gasoline.
- Device explodes.

FIRE BOMB
SHOTGUN SHELL & CIGARETTE
DELAY MOLOTOV
NOT TO SCALE


Cork or lid
Lit cigarette time delay
Thin-walled glass bottle
• NOTE: This device is not thrown.
Gasoline filler
Firecracker taped to side of bottle
FIRE BOMB
MOLOTOV VARIATION
DELAYED INCINERATION
NOT TO SCALE



HOW THIS DEVICE WORKS

- When driver sits down, the mousetrap fly-bar is depressed, touching the thumbtack and completing the circuit.
- Firecracker explodes, breaks test tube.
- Chemicals mix and explode.

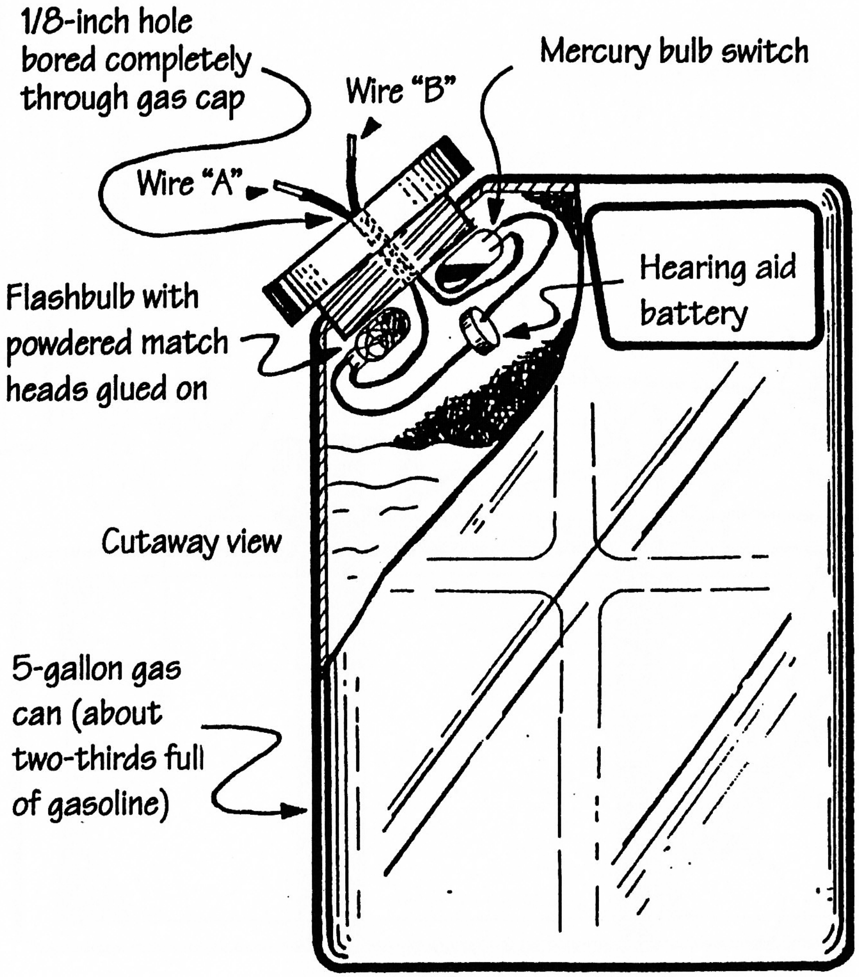
Insulated wire leads
Automobile drivers seat
Device wedged under drivers seat
Nichrome wire inserted in firecracker
Test tube containing sulfuric acid
Small firecracker
Thumbtack
Fly-bar retaining string
BATTERY
Mousetrap tape to side of bottle
Bottle containing potassium chlorate or ground-up match heads

FIRE BOMB

HYPERGOLIC CAR BOMB

FIRES WHEN DRIVER SITS DOWN

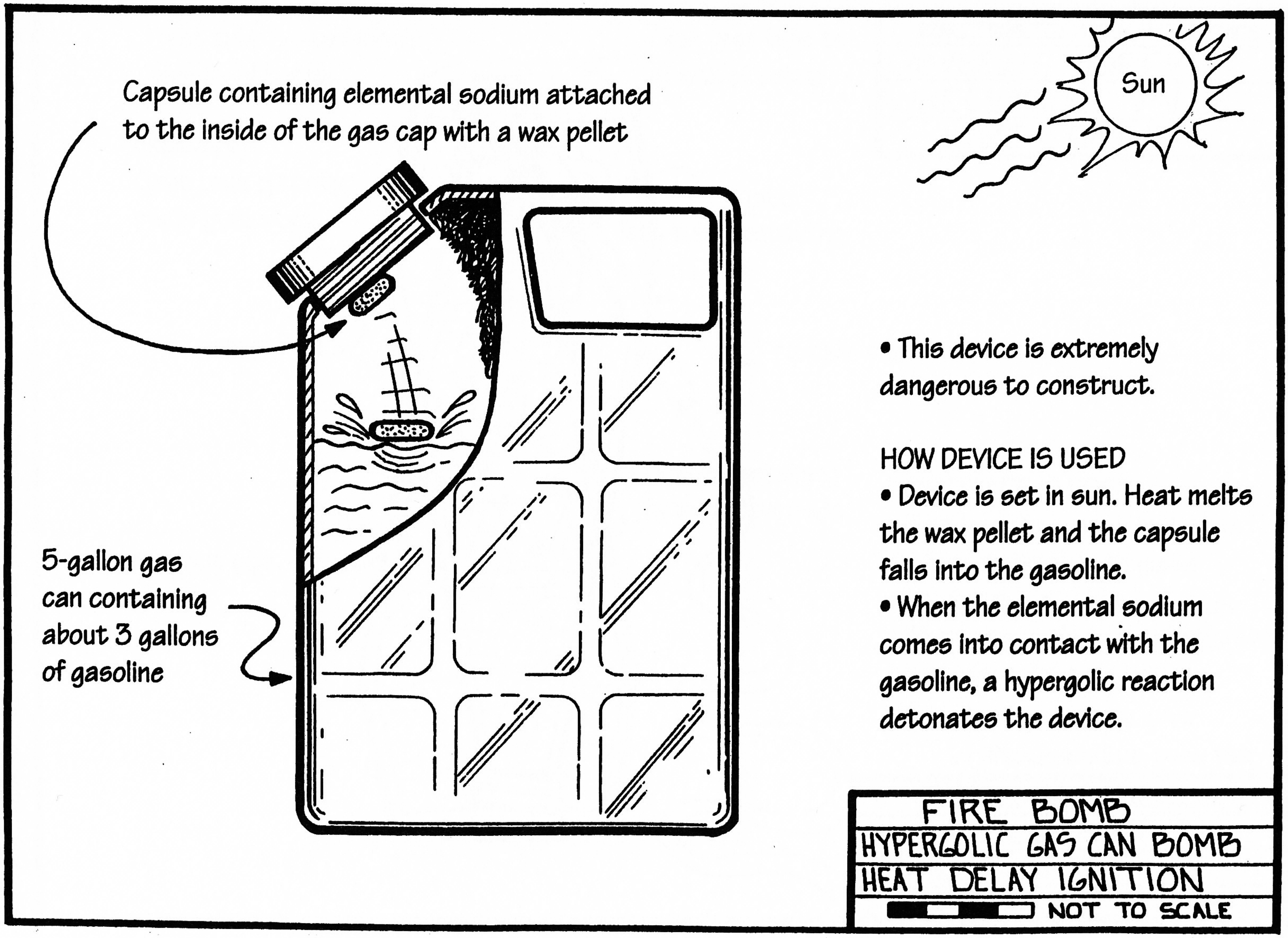
NOT TO SCALE


1/8-inch hole bored completely through gas cap
Wire "B"
Mercury bulb switch
Wire "A"
Hearing aid battery
Flashbulb with powdered match heads glued on
Cutaway view
5-gallon gas can (about two-thirds full of gasoline)

HOW DEVICE IS USED

- Duplicate prepared gas cap is switched with target's gas cap at the sight.
- Prepared gas cap is marked on its exterior so mecury bulb is tilted upright.
- Wires A and B are twisted together and stuffed out of sight down the 1/8-inch hole.
- When the target unscrews the gas cap, the mercury bulb switch is inverted and closes the electrical circuit. This fires the flashbulb, which ignites the gasoline vapors and detonates the gas can.

FIRE BOMB
BOOBY-TRAPPED GAS CAN
WITH FLASHBULB DETONATOR.
NOT TO SCALE



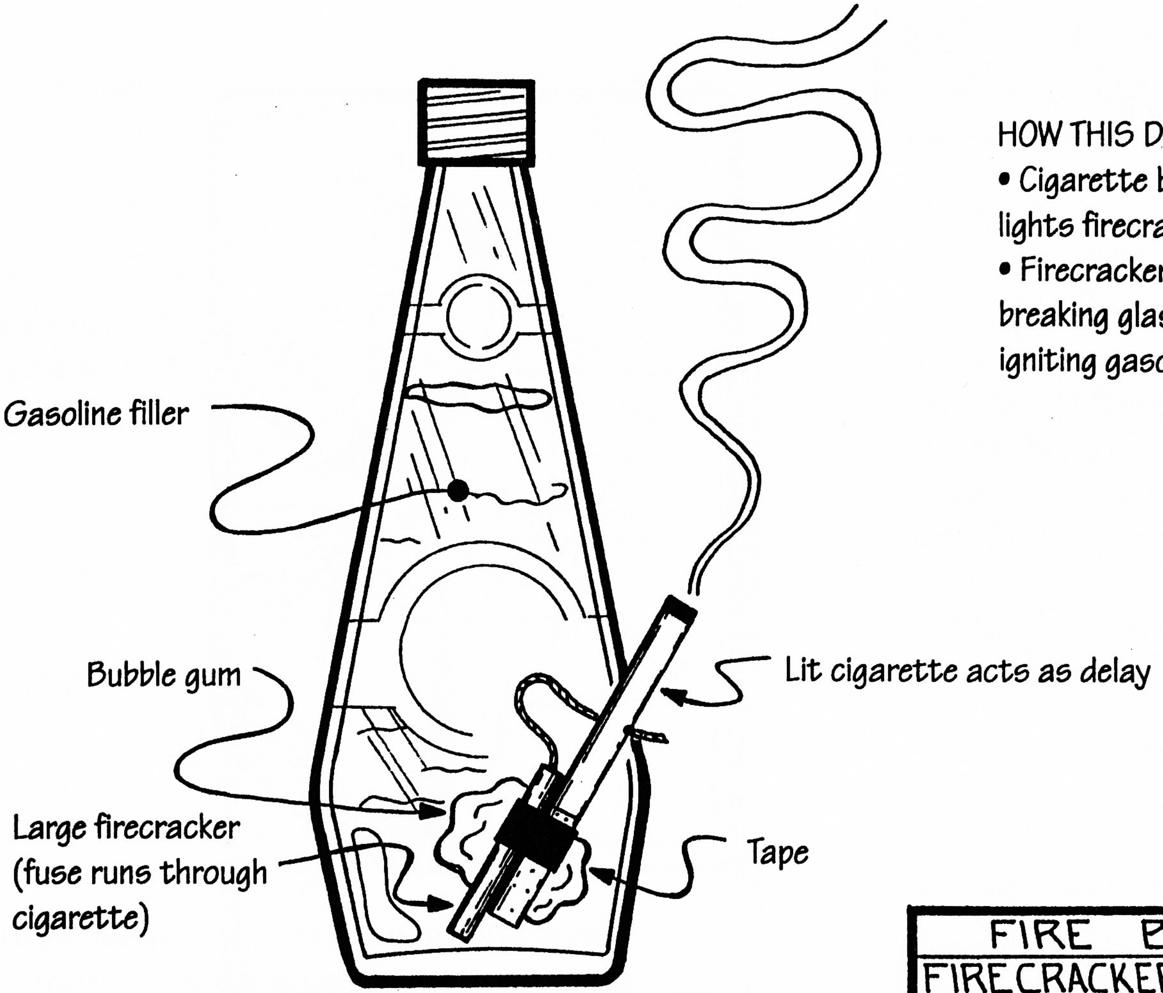
Sun
Capsule containing elemental sodium attached to the inside of the gas cap with a wax pellet
5-gallon gas can containing about 3 gallons of gasoline

- This device is extremely dangerous to construct.

HOW DEVICE IS USED

- Device is set in sun. Heat melts the wax pellet and the capsule falls into the gasoline.
- When the elemental sodium comes into contact with the gasoline, a hypergolic reaction detonates the device.

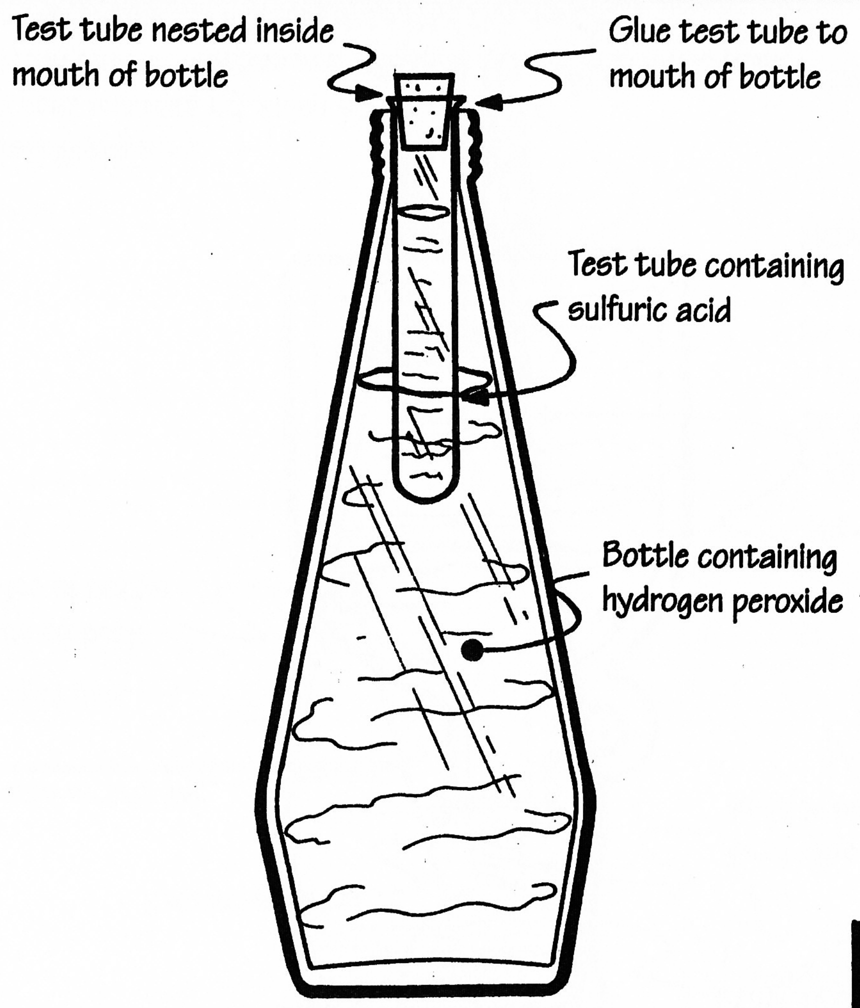
FIRE BOMB
HYPERGOLIC GAS CAN BOMB
HEAT DELAY IGNITION
NOT TO SCALE


Gasoline filler
Bubble gum
Large firecracker (fuse runs through cigarette)
Lit cigarette acts as delay
Tape

HOW THIS DEVICE WORKS

- Cigarette burns down and lights firecracker fuse.
- Firecracker detonates, breaking glass bottle and igniting gasoline contents.

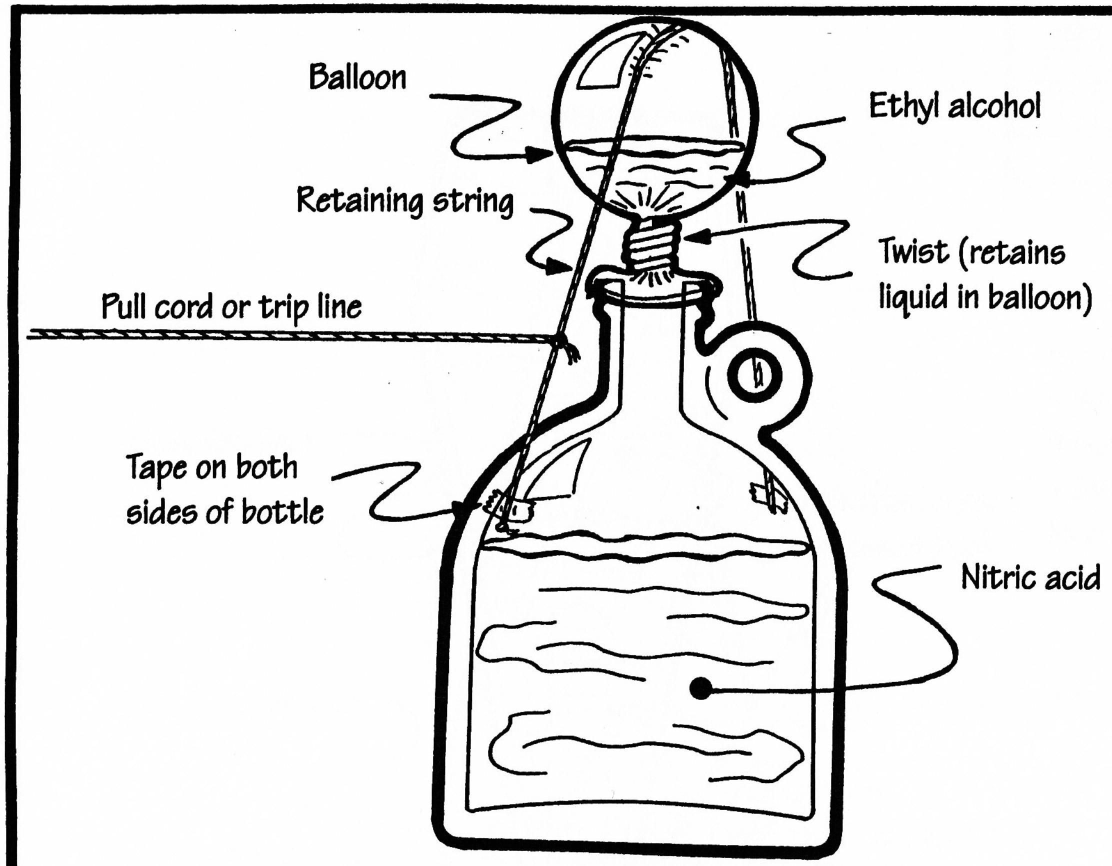
FIRE BOMB
FIRECRACKER WITH
CIGARETTE DELAY
NOT TO SCALE


Test tube nested inside mouth of bottle
Glue test tube to mouth of bottle
Test tube containing sulfuric acid
Bottle containing hydrogen peroxide

HOW DEVICE IS USED

- Bottle is thrown against hard surface to break both glass containers.
- When chemicals mix, an explosion takes place, followed by fire.

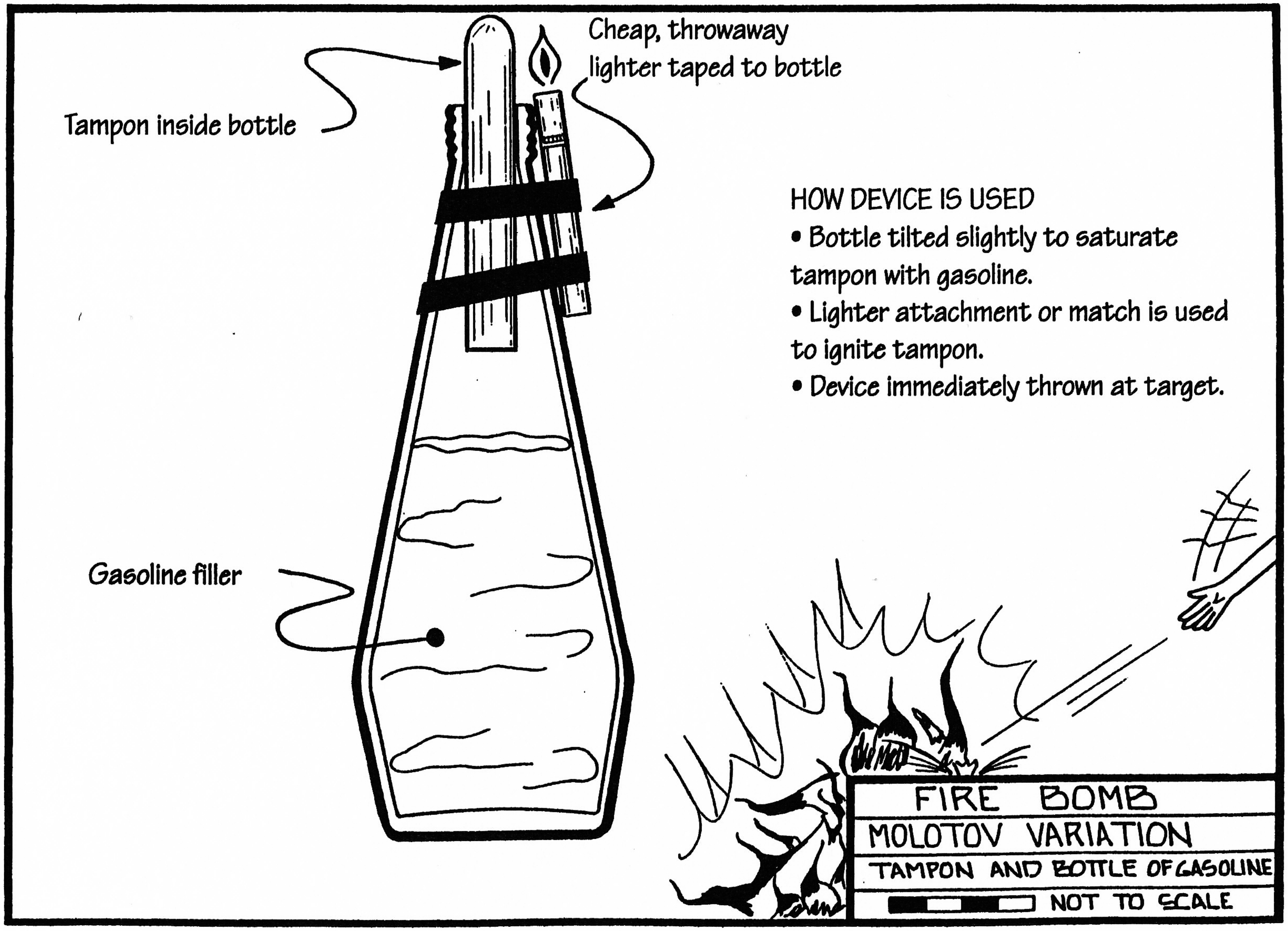
FIRE BOMB
HYPERGOLIC MIXTURE
TYPE DEVICE.
NOT TO SCALE


Balloon
Ethyl alcohol
Retaining string
Twist (retains liquid in balloon)
Pull cord or trip line
Tape on both sides of bottle
Nitric acid

DEVICE IN USE

- Pull cord releases retaining string.
- Twist in balloon unwinds and releases alcohol into nitric acid.
- The two chemicals mix and detonate the device.

FIRE BOMB
CHEMICAL REACTION BOMB
FIRED VIA PULL CORD.
NOT TO SCALE


Tampon inside bottle
Cheap, throwaway lighter taped to bottle
Gasoline filler
FIRE BOMB
MOLOTOV VARIATION
TAMPON AND BOTTLE OF GASOLINE
NOT TO SCALE

HOW DEVICE IS USED
- Bottle tilted slightly to saturate tampon with gasoline.
- Lighter attachment or match is used to ignite tampon.
- Device immediately thrown at target.